United States
Department of Agriculture

Natural Resources
Conservation Service

Davis, California

Lower Silver Creek Watershed Project

Report 2 of 3

Jurisdictional Delineation

Sponsored by:
Santa Clara Valley Water District
Evergreen Resource Conservation District
USDA/ Natural Resources Conservation Service

December 1994

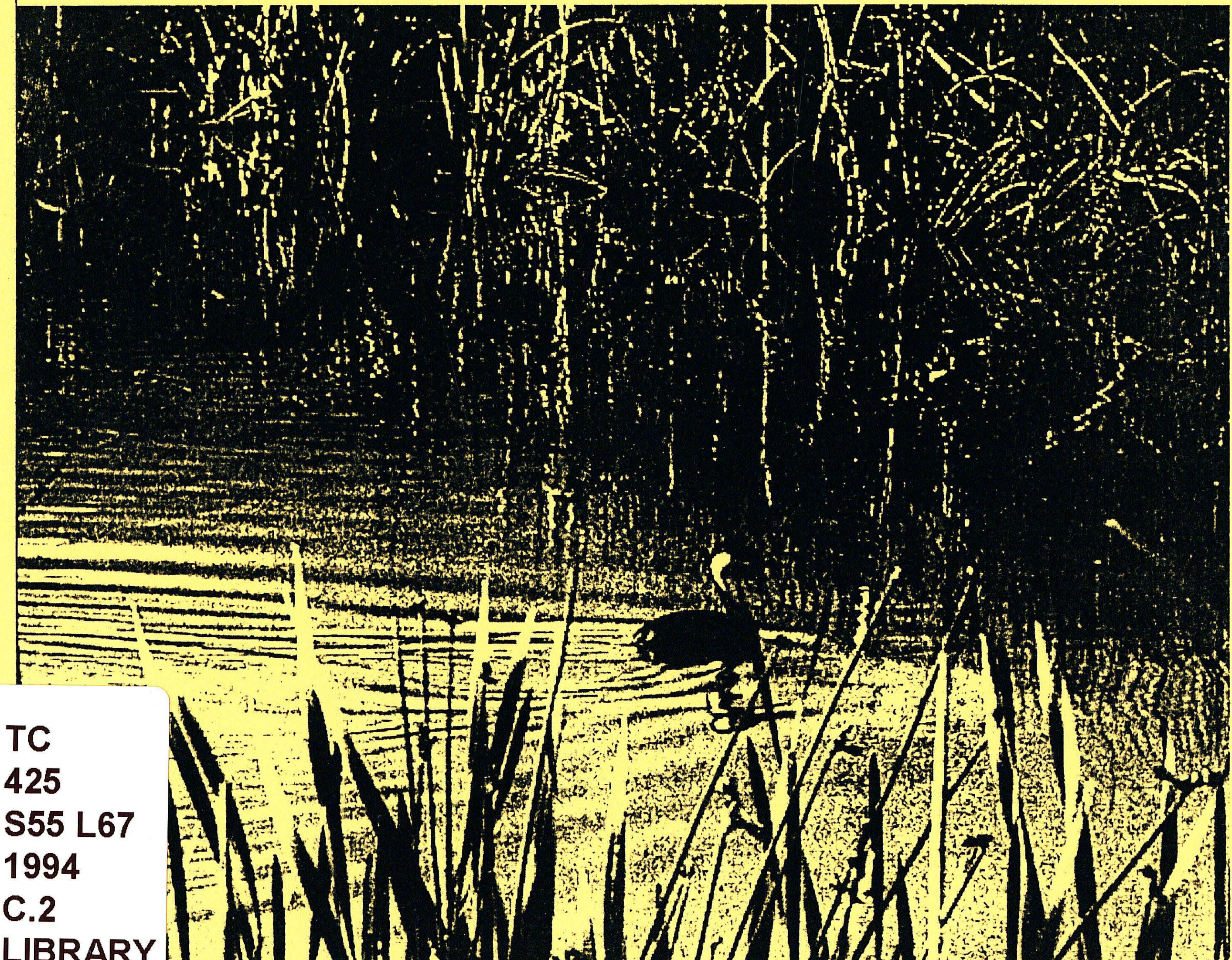

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Table of Contents:

Summary 3
Description of Project 4
Proposed Mitigation 5
Field Investigation of Lower Silver Creek 6
Vegetation 7
Soils 8
Hydrologic Determination of Two Year Base Flow....................8
Results 9
Citations 9

Tables:

Table 1. Jurisdictional and Non-Jurisdictional Areas 6
Table 2. Plant Species Observed During Wetland Survey 7

Appendices:

Appendix A, Jurisdictional Delineation Plates ....A
Appendix B, Hydric Soil and Wetland Determination Forms ....B

Summary:

Jurisdictional wetlands and waters were surveyed along Reach 1 through 6 of Lower Silver Creek by the USDA/ Natural Resources Conservation Service (NRCS), (formally the Soil Conservation Service). The delineation was performed from Lower Silver's confluence with Coyote Creek to the outlet of Lake Cunningham at Cunningham Boulevard, a distance of approximately 4.58 miles. The purpose of this delineation is to provide information to the U.S. Army Corps of Engineers for use determining jurisdictional waters that may be impacted during ~~in processing the application from the Santa Clara Valley Water District for a permit to~~ construction for flood control improvements within Lower Silver Creek.

how was OHW determined

Approximately 8.8 acres of jurisdictional wetlands and waters of the United States were identified within the project area, 4.7 acres are wetlands and 4.1 acres are open water. Jurisdictional wetlands and waters occur exclusively within the banks of the earth channels.

Lower Silver Creek's wetlands are formed at the edge of the low-flow water line and extend varying distances upslope. The wetlands occur as bands on either side of the existing low flow channel. The width of the bands range from 1.5 to 16 feet wide. Outside the project area, there are wetlands along Lower Silver Creek south of Lake Cunningham, along Flint and Ruby Creeks north of Lake Cunningham and along Coyote Creek.

The proposed project features include constructing @ 0.74 miles of vegetated earth channel, @ 2.13 miles of hybrid vegetated block wall channel, @ 0.64 miles of trapezoidal concrete channel and @ 0.24 miles of rectangular concrete channel. Proposed flood control improvements would be constructed completely within the existing creek corridor and would directly impact jurisdictional waters and wetlands surveyed within what? All 8.8 acres of jurisdictional area will be impacted by construction. The construction activities of Lower Silver Creek will have no impact to the dense riparian woodland along Coyote Creek or the wetlands along the creeks near Lake Cunningham.

delete - not appropriate for delineation report

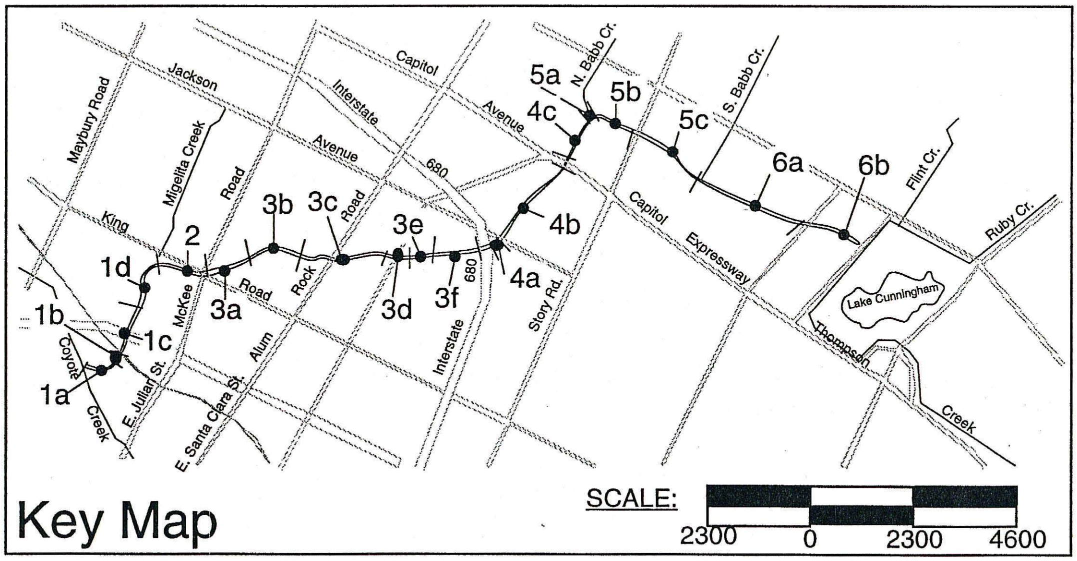
Mitigation for impacts to wetlands along Lower Silver Creek will occur within the existing right-of-way. Approximately 6.1 acres of wetlands will be created along with 4.4 acres of open water (summer flow). A Habitat Mitigation and Monitoring Program has been prepared and being submitted concurrently with the Permit Application to the Regulatory Branch of the US Army Corps of Engineers.

Project Area Description - where located, length of channel w/in Study area, ~~whole~~ watershed, USGS map description, Rainfall, Tc, Soils..

Description of Project: SCS/ joint SCWD project...

The purpose of this project is to reduce floodwater and related damages and the potential loss of life to the residents San Jose near Lower Silver Creek. By modifying 4.58 miles of channel to convey the 1 percent storm event, damages to buildings and vehicles, roadway closures and the need for emergency services would be greatly reduced.

Proposed channel modification will occur within the existing 45' to 200' wide right-of-way. The project area includes all land within the proposed right-of-way from just downstream of the Cunningham Avenue bridge west to the confluence with Coyote Creek. The land uses along the right-of-way include residential, commercial and industrial development. The proposed plan was selected from a series of alternatives and includes @ 0.74 miles of multi-stage vegetated earth channel, @ 2.13 miles of vegetated hybrid block wall channel, @ 0.64 miles of architecturally treated trapezoidal concrete channel and @ 0.24 miles of architecturally treated rectangular concrete channel.



IP Purpose statements...
SCS biologists surveyed the project site to id. jurisdiction waters....

Reach	Proposed Channel Type	Approx. Length
1a	Earth	650'
b	Trapazoidal concrete	500'
c	Trapazoidal concrete	1300'
d	Earth w/ floodwalls	100'
2	Rectangular concrete	1266'
3a	Earth	1600'
b	Trapazoidal concrete	950'
c	(Existing Trapazoidal channel to remain)	2075'
d	Trapazoidal concrete	650'
e	Earth	660'
f	Earth	900'
4a	Hybrid Concrete Block w/ Topsoil over Riprap	230'
b	Hybrid Concrete Block w/ Topsoil over Riprap	2400'
c	Hybrid Concrete Block w/ Topsoil over Riprap	1440'
5a	" " w/ Transition structure	175'
b	Hybrid Concrete Block w/ Topsoil over Riprap	800'
c	Hybrid Concrete Block w/ Topsoil over Riprap	1900'
6a	Hybrid Concrete Block w/ Topsoil over Riprap	1540'
b	Hybrid concrete block w/ earth bottom	2740'

~~Proposed Mitigation:~~

delete

The areas of existing wetlands, open water, the @ 2 year Base Flow line (Ordinary High Water Line) and upland (non-jurisdictional) vegetation above the Base Flow Line are illustrated on the plates. **See Appendix A.** The 6.1 acres of wetland mitigation will occur in the inverts and along the low flows of earth and hybrid block channels for a replacement ratio of 1.3 to 1. Approximately 22.2 acres of native riparian trees and shrubs will be planted along the low flow and the tops of the channel banks for a replacement ratio of 5.4 to 1.

Fishery mitigation will include the construction of low flow channels, low drop structures, resting pools and riffles. Vegetation will be planted to shade the low flow as much as possible and to provide energy input. By separate agreements, the Santa Clara Valley Water District will construct fish ladders at the Thompson Creek drop structure and the Evergreen Resource Conservation District will operate and monitor a fishery enhancement program. A detailed description of the proposed project features can be found in the Lower Silver Creek Watershed Project companion report 1 of 3: "Design Alternatives and Plan Update".

Field Investigation of Lower Silver Creek

A USDA/ Natural Resources Conservation Service team consisting of three biologists, a soil scientist and a hydraulic engineer surveyed Lower Silver Creek wetlands on January 14 and 15, 1992. Wetlands and jurisdictional waters were delineated using the method outlined in the US Corps of Engineers Wetland Delineation Manual, Waterways Experiment Station, 1987. The three indicators, hydrophytic plant community, hydric soils, and wetland hydrology were used.

need vicinity map

? 14 points per 10 stops? what is a stop? How far apart?

Ten stops with 14 sampling points were made within or near the project area. ~~The entire project area was surveyed.~~ Each stop had a sampling ? point within a typical ~~channel section and a second~~ point was investigated perpendicular to the creek in areas that exhibited overflow potential. At the time of the survey, the channel had a low flow of approximately 3 to 5 cfs.

miles ?

On site map designate boundaries & project w/ pointers

How were sample points determined? regular intervals? What about in between sample points - visual inspection?

At each sampling point, information on vegetation, soils, and hydrology was recorded on soil logs and wetland determination forms. **See Appendix B.** Dominant plant species were recorded. Soils were sampled to a depth of 15 inches minimum and 60 inches maximum. Width of open water and evidence of wetland hydrology was recorded. The approximate limits of jurisdictional areas are identified on aerial photograph base maps. **See Appendix A.** The Jurisdictional and Non-Jurisdictional Areas delineated in the project area are summarized in Table 1.

should be 2 major sections ① Tributary waters and ② wetlands for ① how was OHW determined?

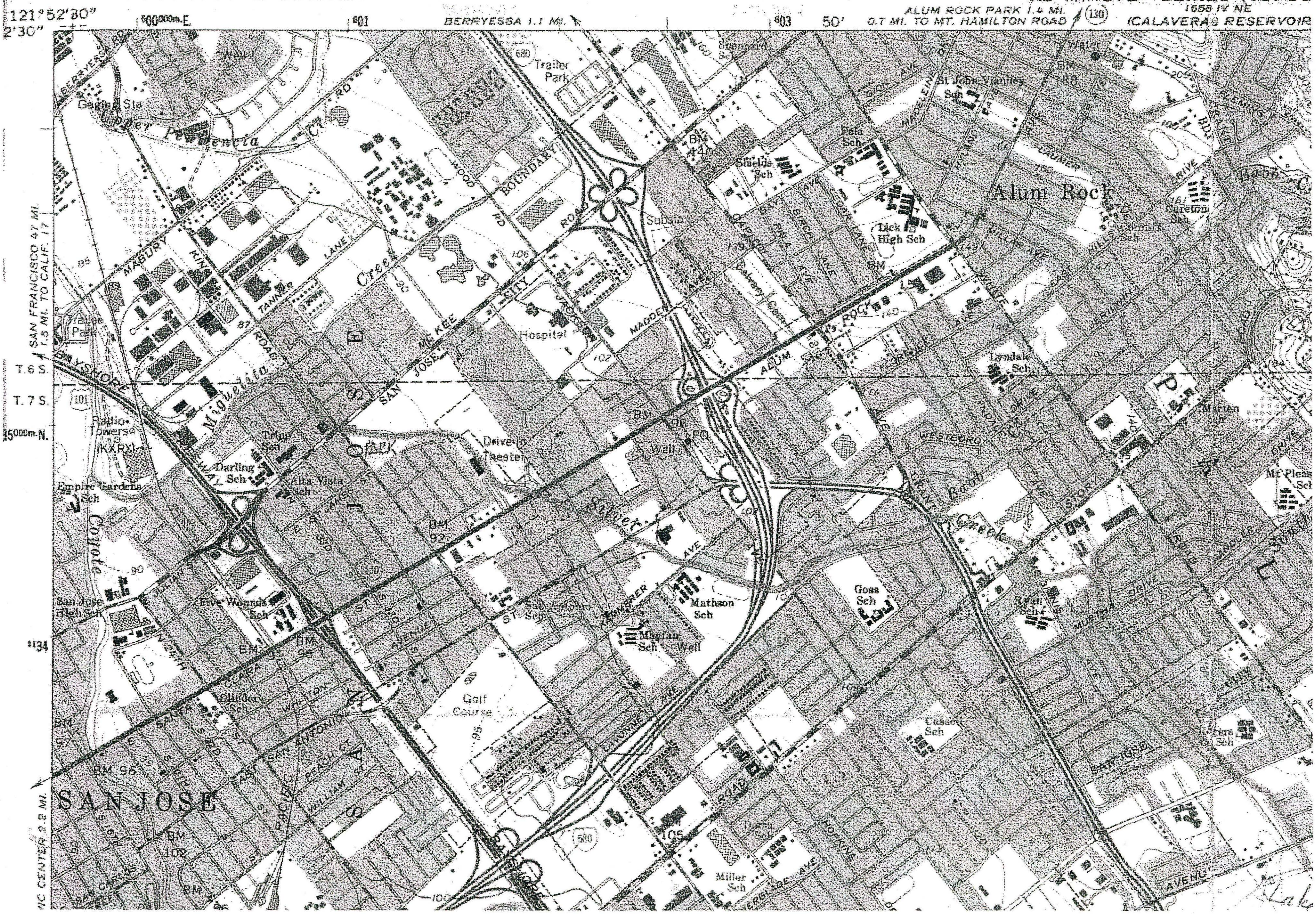
Table 1. Jurisdictional and Non-Jurisdictional Areas in Project Area:

	Jurisdictional Areas Delineated in Project Area (AC)	*Area Impacted by Proposed Project (AC)*	*Proposed Areas (AC)*	*Mitigation Replacement to Area Impacted Ratio:*
Wetlands:	4.7	4.7	6.1 (**Mitigation**)	1.3 to 1
Waters (summer low flow):	4.1	4.1	4.4 (@ 8' wide)	----------
Waters (@ 2 Year Base Flow):	6.1	6.1 (est.)	27.8 (est.)	----------
Non-Jurisdictional Areas (AC)				
Riparian:	4.1	4.1	22.2 (Mitigation)	5.4 to 1

A copy of the USGS quadrangle showing the project site follows:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SAN JOSE EAST QUADRA
CALIFORNIA–SANTA CLAR
7.5 MINUTE SERIES (TOPOG



what authority was used to id plant spp?

is this OHW? if so use that term if not the What is it?

Vegetation: Plant species observed within the wetland area include cattails, blackberry, Bermuda grass, rabbitsfoot grass, smartweed, willow, hardstem bulrush, Annual ryegrass, cocklebur, common smartweed, nutgrass, barnyardgrass, bulthistle, sweet fennel. Plant species observed above the Base Flow line to the top of the channel slope (earth channels only) were mostly herbaceous understory including annual grasses, blackberries, mulefat, baccharis, wild radish, rough cocklebur, willows, morning glory, mugwort, Russian thistle and box elder. Plant species observed along the top of the channel and along nearby properties are mostly exotic species including eucalyptus, wild cherry, callery pear, acacia, poplar, and other ornamentals. **Table 2** lists the scientific name, common name, and wetland indicator status of species observed:

Table 2. Plant species observed during wetland survey:

Scientific Name	Common Name	Wetland Indicator Status
Acer negundo	Box Elder	FACU
Agrostis stolonifera	Spreading bentgrass	FACW
Artemesia douglasiana	Mugwort	FACW
Arundo donax	Giant reed	FACW
Baccharis pilularis	Coyote brush	UPL
Baccharis salicifolia	Mulefat	FACW
Cirsium vulgare	Bulthistle	FACU
Convolvulus tricolor	Morning glory	UPL
Cynodon dactylon	Burmuda grass	FAC
Cyperus eragrostis	Nut grass	FACW
Cyperus escedertus	Nut grass	FACW
Echinochlo crusgalli	Barnyardgrass	UPL
Euthamia occidentalis	Fragrant goldenrod	OBL
Foeniculum vulgare	Sweet fennel	FACU
Lolium multiflorum	Italian ryegrass	UPL
Lolium perenne	Annual ryegrass	UPL
Phalaris sp.	Marsh timothy	OBL
Polygonum lapathifolium	Common smartweed	OBL
Polygonum punctatum	Dotted smartweed	FACW
Polypogon monspeliensis	Rabbitsfoot grass	FACW+
Raphanus sativus	Wild radish	UPL
Rubus vitifolius	Blackberry	FACW
Scirpus acutus	Hardstem bulrush	OBL
Salix sp.	Willow	OBL
Salsola kali	Russian thistle	FACU
Silybum marianum	Thistle	UPL
Typha angustigolia	Cattail	OBL
Typha latifolia	Narrow leaf cattail	OBL
Xanthirm spinosum	Cocklebur	FAC+
Xanthium strumarium	Rough cocklebur	FAC+

Indicator Status Key:

OBL	Obligate - Species that is nearly always found in wetlands.
FAC	Facultative - Species that are equally likely to occur in wetlands and nonwetlands.
FACU	Facultative Upland - Species that usually occur in nonwetlands but occasionally are found ir wetlands.
FACW	Facultative Wetland - Species that usually occur in wetlands but are occasionally found in nonwetlands.
UPL	Upland - Areas not qualifying as wetlands.
+/-	Greater (+) or lesser (-) frequency in wetlands or nonwetlands.

Soils:

Could include the SCS soils excerpt

The soils of the project site include Campbell clay loam and silty clay, Clear Lake (adobe) clay, undifferentiated Mocho soils, Sorrento clay loam, loam and Sunnyvale clay, all on 0 to 1 percent slopes. The 1958 soil survey indicates that the creek passed through areas of slight to strong soluble salts or alkali. of these Clear Lake clay is the only soil listed in the Hydric Soils of the United States report.

Approximately half of the project is within the Clear Lake clay (adobe) mapping unit. These soils are described as a dark gray, noncalcareous, neutral of slightly basic (pH 7.0 to 7.8) clay that upon drying cracks to large blocks of typical adobe structure. Much of the unit is affected by salts. (USDA/SCS Soil Survey, 1958). Much of the soils in the creek bed are unconsolidated alluvium. All of the creek throughout the project area has been greatly altered. The creek has been disturbed by excavation for flood reduction and construction of commercial and residential developments. Within the creek, gravels and rocks and large amounts of broken concrete and granite were observed. Soils were not saturated above the level of the open water in the creek bed. The hydric soil determinations and wetland determination forms used are included in **Appendix B.** summarize the info here. Were soil pits dug? how deep? What indicators were observed what chromas? mottling? Hydric soils.

What were characteristics of non hydric soils? above OHW

Hydrological Determination of the Two Year ~~Base Flow (~~Ordinary High Water Line:

This is diff then hydrologic indicators of wetlands. OHW is used to id boundaries of waters of US, not necessarily wetlands.

The Two Year Base Flow Line was determined by comparing data collected during the field investigations to data interpolated from NRCS's Unit Hydrograph Model "TR-20". Lower Silver's 2 year discharge is @1,340 cfs at Reach 1 (at the confluence with Coyote Creek and 700 cfs at Reach 6 (at Cunningham Avenue).

Numerous factors were used to determine the Base Flow Line, the limit of Waters of the United States. Stream gauge data, flood history and frequency of inundation were analysed. Several field visits were undertaken to observe inundation, saturated soil, sediment deposition, watermarks and erosion. The corresponding elevations were then transferred to base maps. **See Appendix A.**

what indicators of hydrology were observed at sample sites? Relate specifically to id of wetlands.

Results:

4.7 acres of wetlands and 4.1 acres of open water are within the Corps' jurisdiction. The wetlands within the project area occur exclusively inside the banks of Lower Silver Creek. Emergent marsh vegetation and other wetland plants are growing along the low flow channel and varied distances upslope. The limit of jurisdictional waters was determined to be the elevation of the @ 2 Year Base Flow discharge.

were there any problem areas?

delete

Lower Silver Creek wetlands provide medium to low quality habitat value for riparian species and other wildlife species. The open water provides aquatic habitat for fish species. Mitigation for loss of wetland and riparian habitat is described in Report 1 of 3: "Design Alternatives and Plan Update" Lower Silver Creek Watershed Project. Report 3 of 3: "Mitigation and Monitoring Program" details mitigation and monitoring elements for the project.

Citations:

Reed, P. B., 1988, *National List of Plant Species that Occur in Wetlands: California* . US Fish and Wildlife Service, Washington, D.C.

US Army Corps of Engineers, Waterways Experiment Station, 1987, *Wetlands Delineation Manual*, Wetlands Research Program Technical Report Y-87-1, Vicksburg, MS.

US Department of Agriculture, Soil Conservation Service, 1958, *Soil Survey of Santa Clara County, California.*

US Department of Agriculture, Soil Conservation Service, 1993, *Hydric Soils of the United States.* Miscellaneous Publication Number 1491.

APPENDIX A

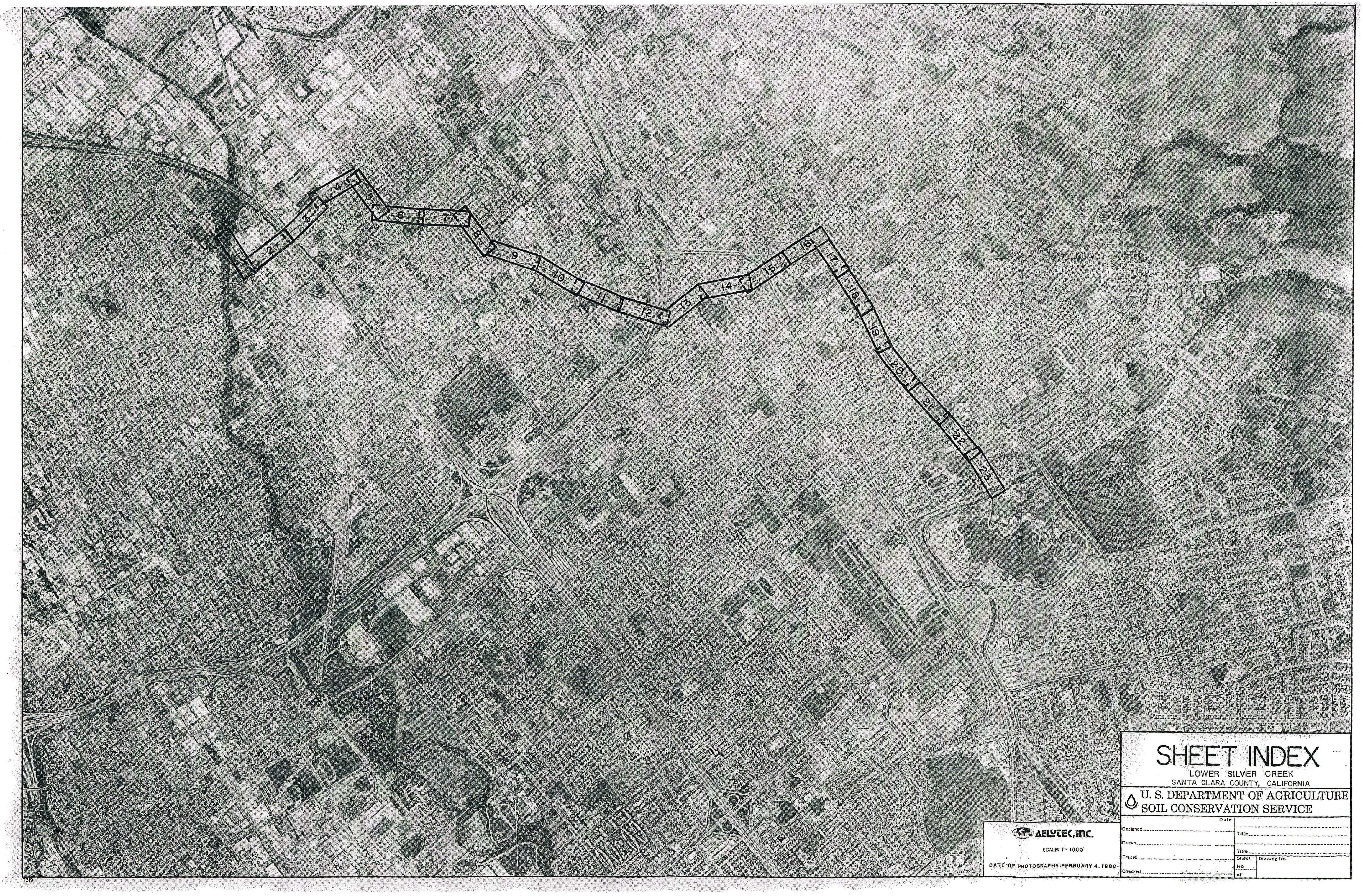
Lower Silver Creek

Santa Clara County,
California

Jurisdictional Delineation

USDA
Natural Resources
Conservation Service
Davis, California

January 1995



SHEET INDEX

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

AEROTEK, INC.

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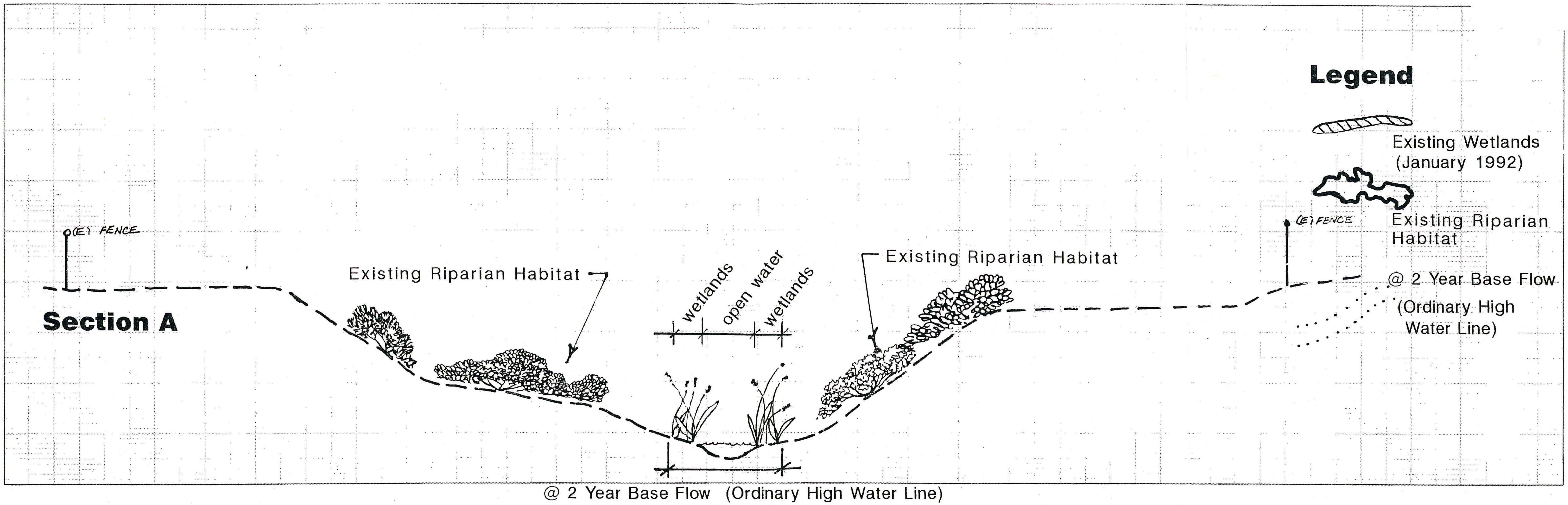
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open water
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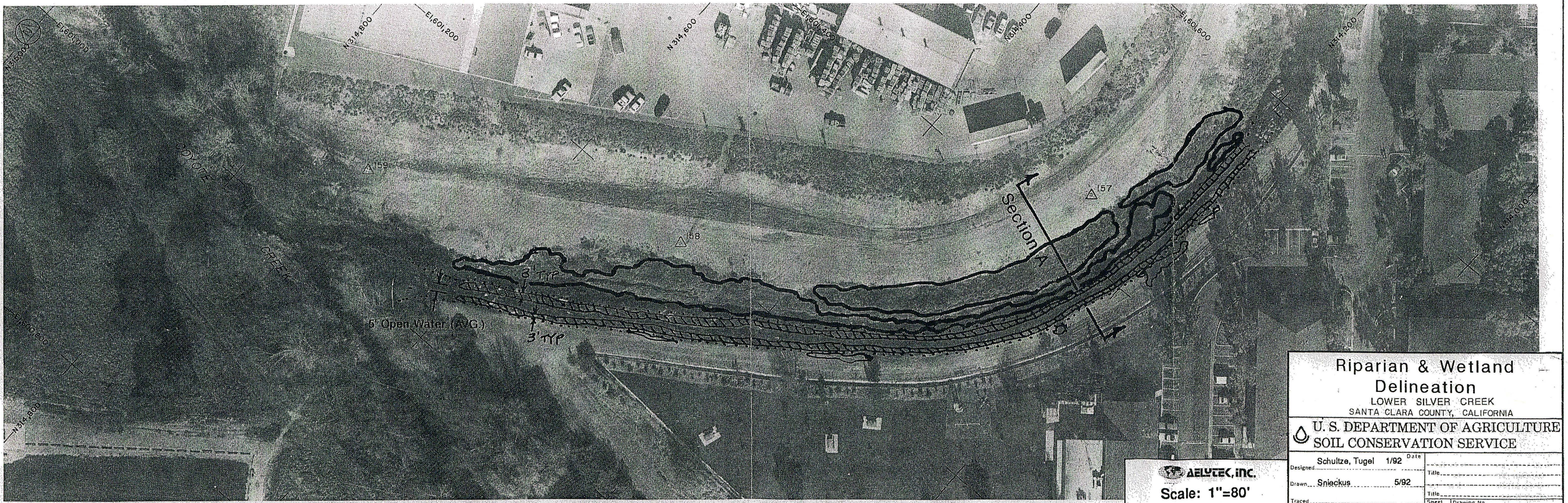
Existing Riparian Habitat
(E) FENCE
@ 2 Year Base Flow (Ordinary High Water Line)
@ 2 Year Base Flow (Ordinary High Water Line)



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Riparian & Wetland Delineation

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SANTA CLARA COUNTY, CALIFORNIA

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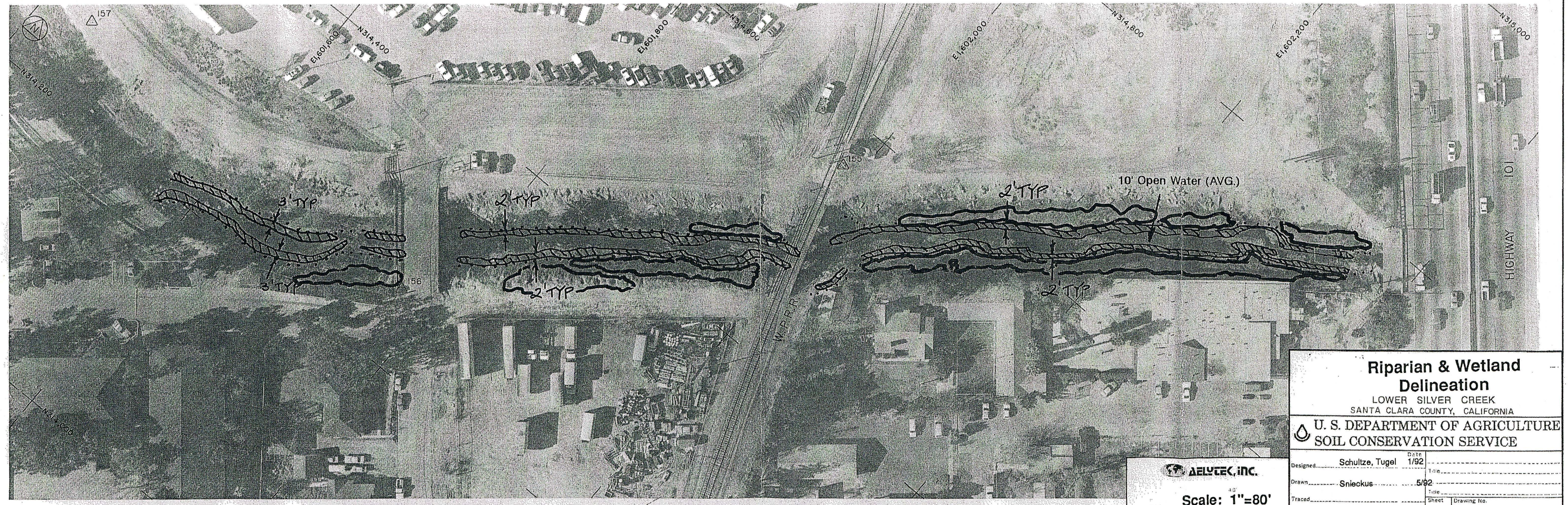

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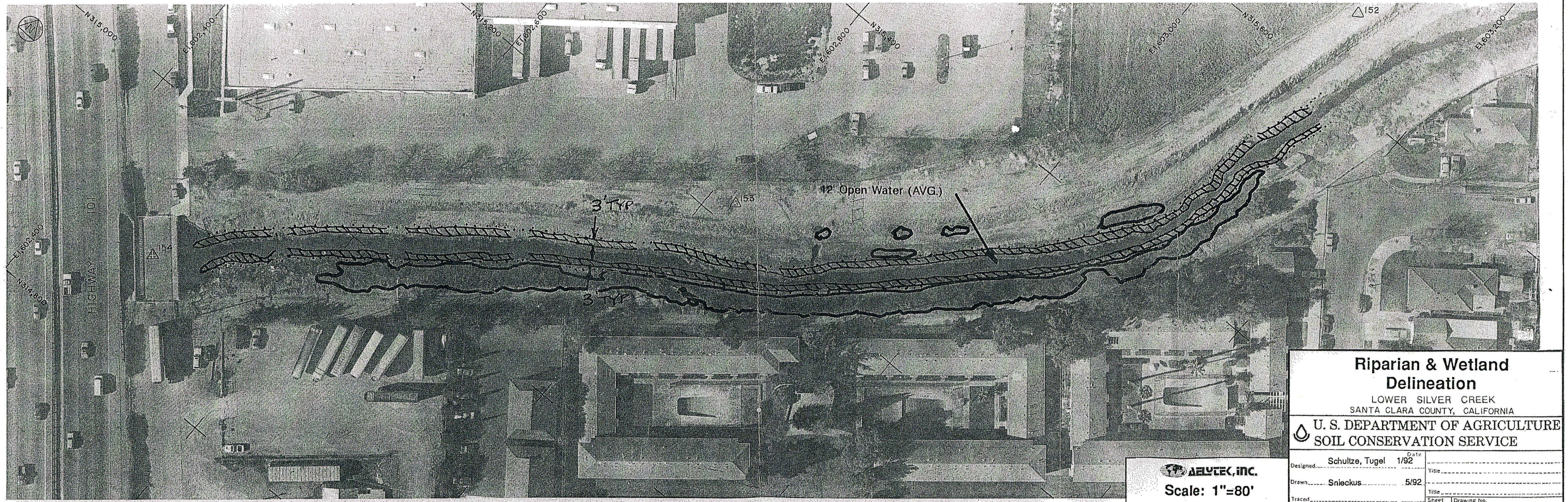

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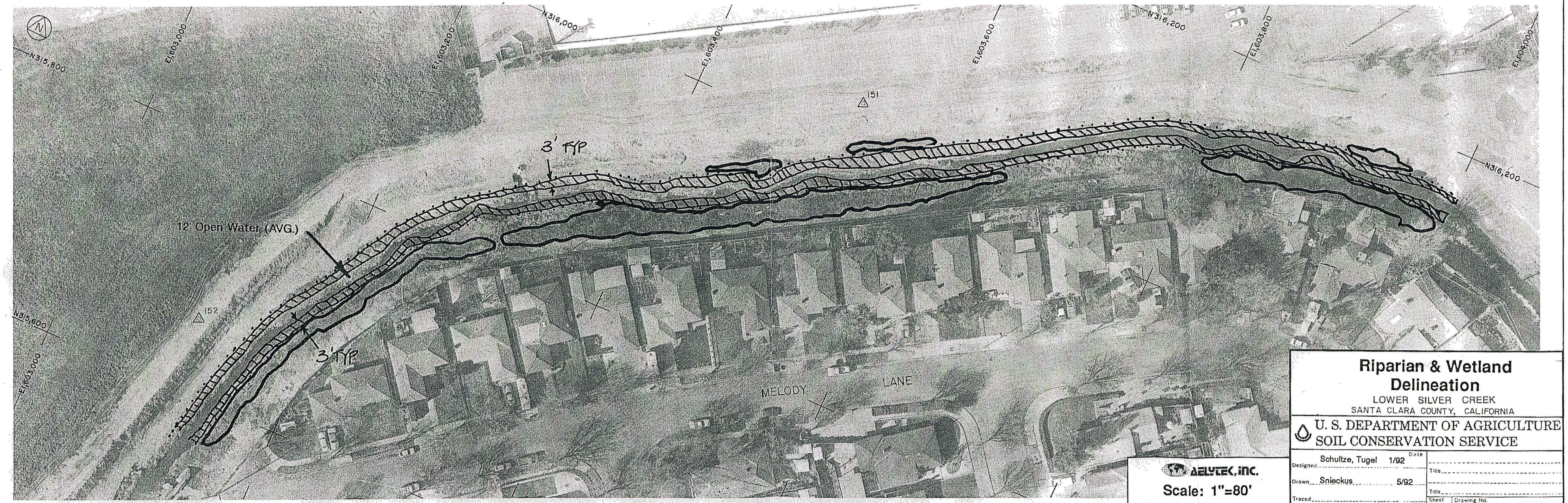

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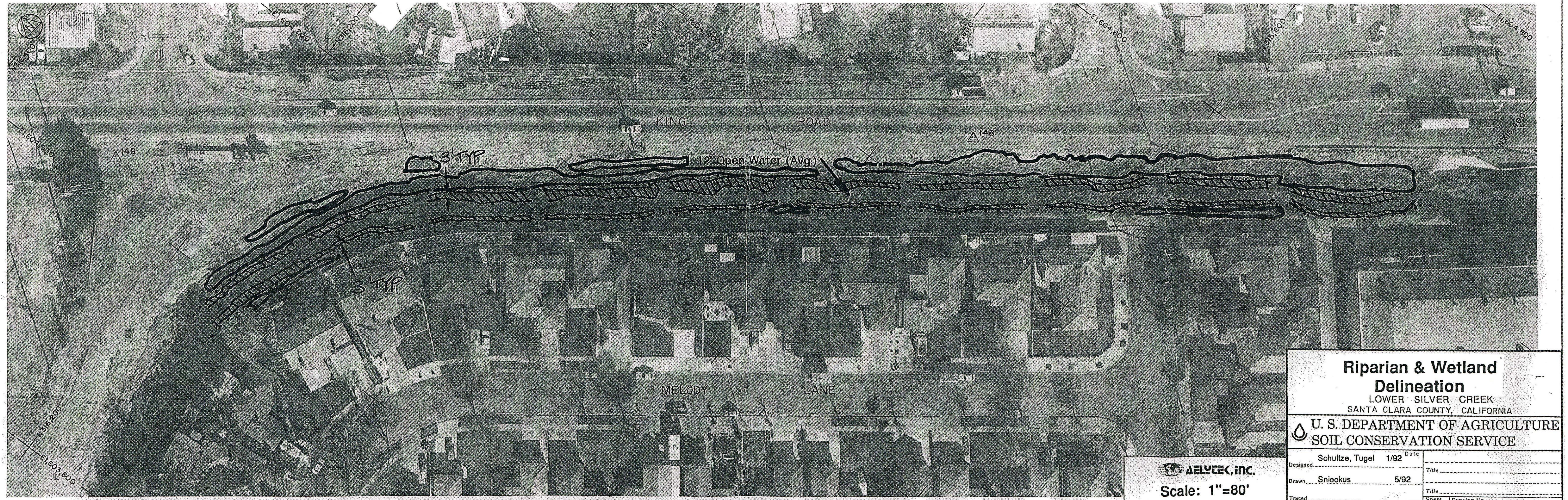

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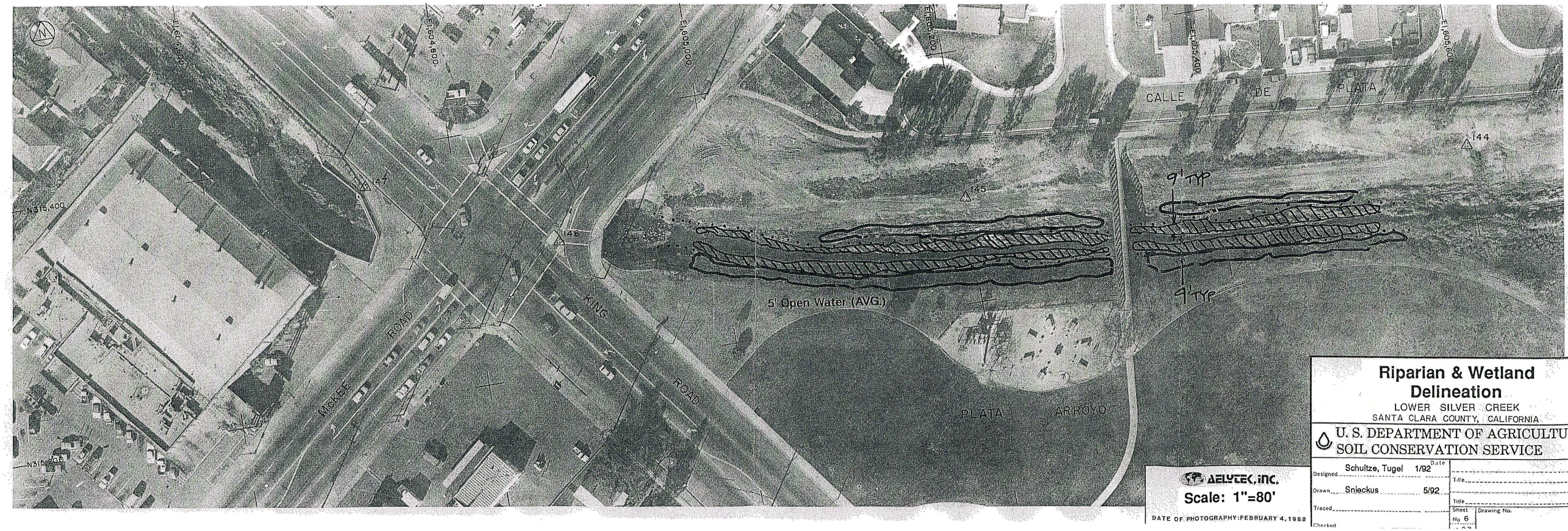

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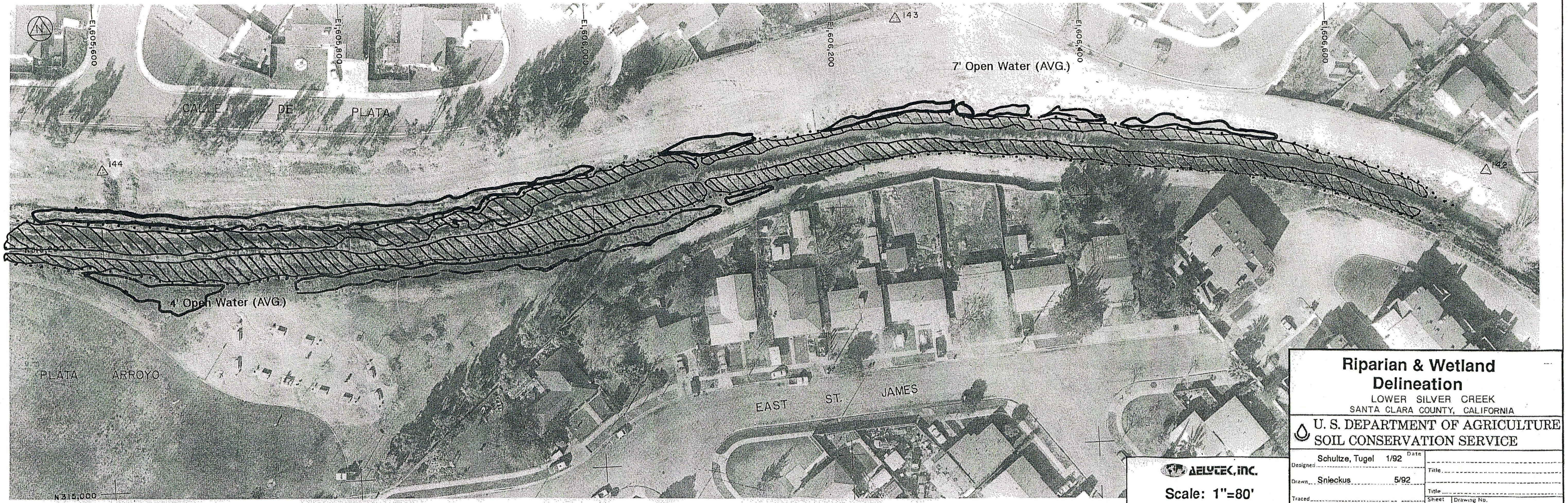

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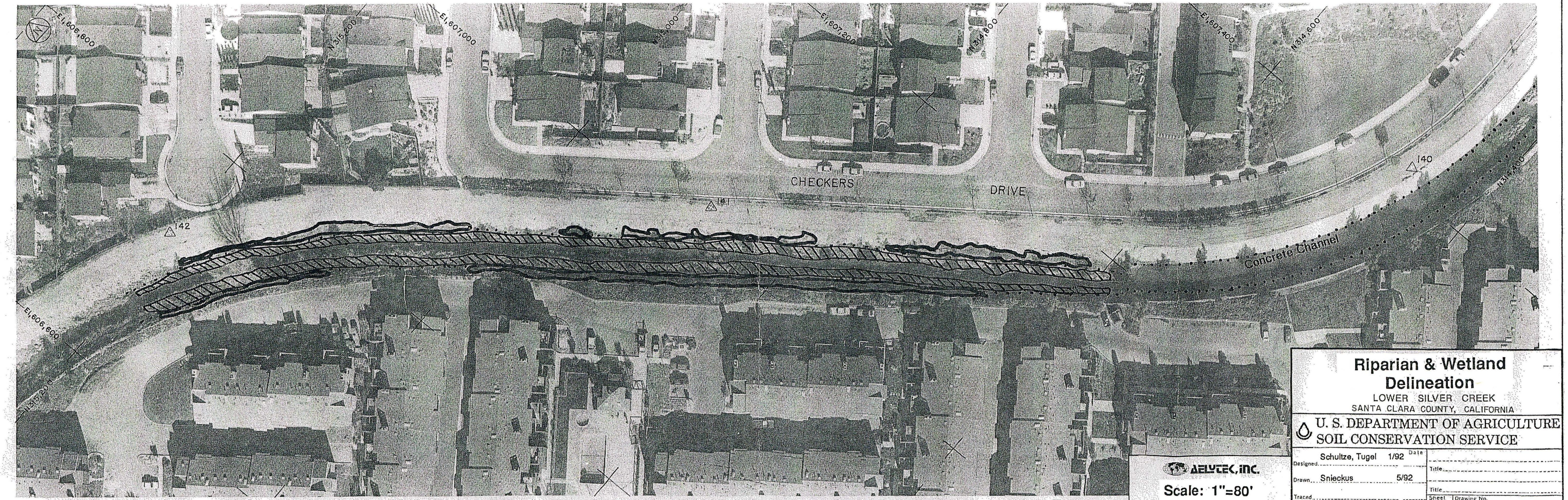

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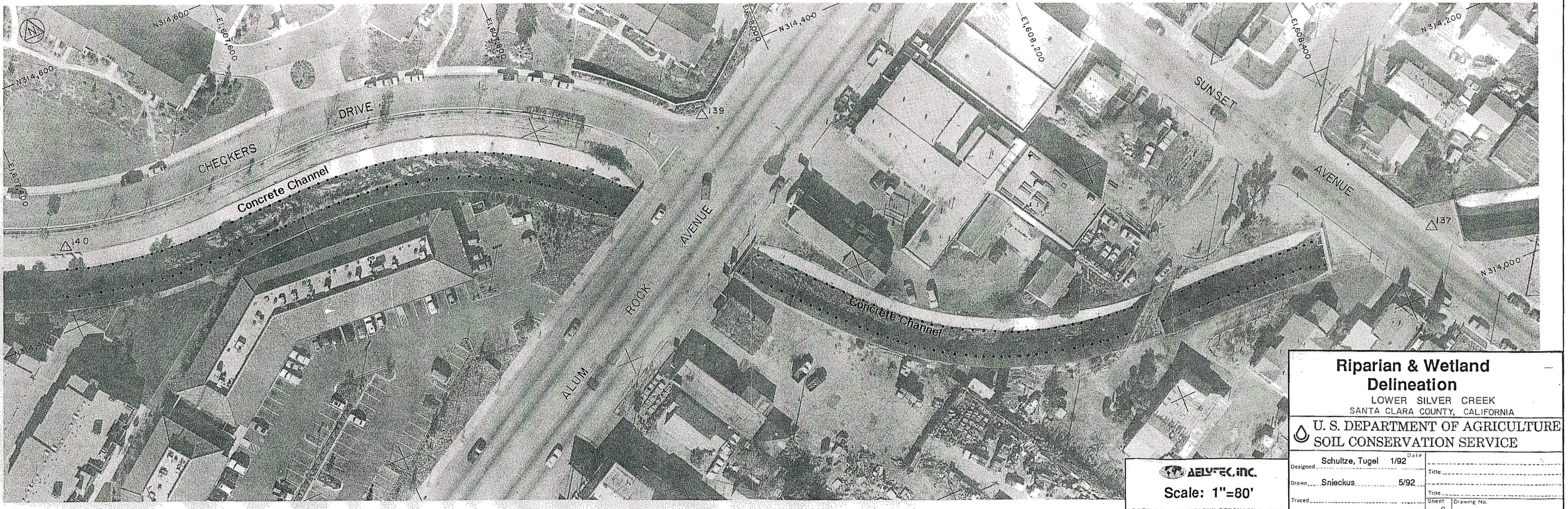

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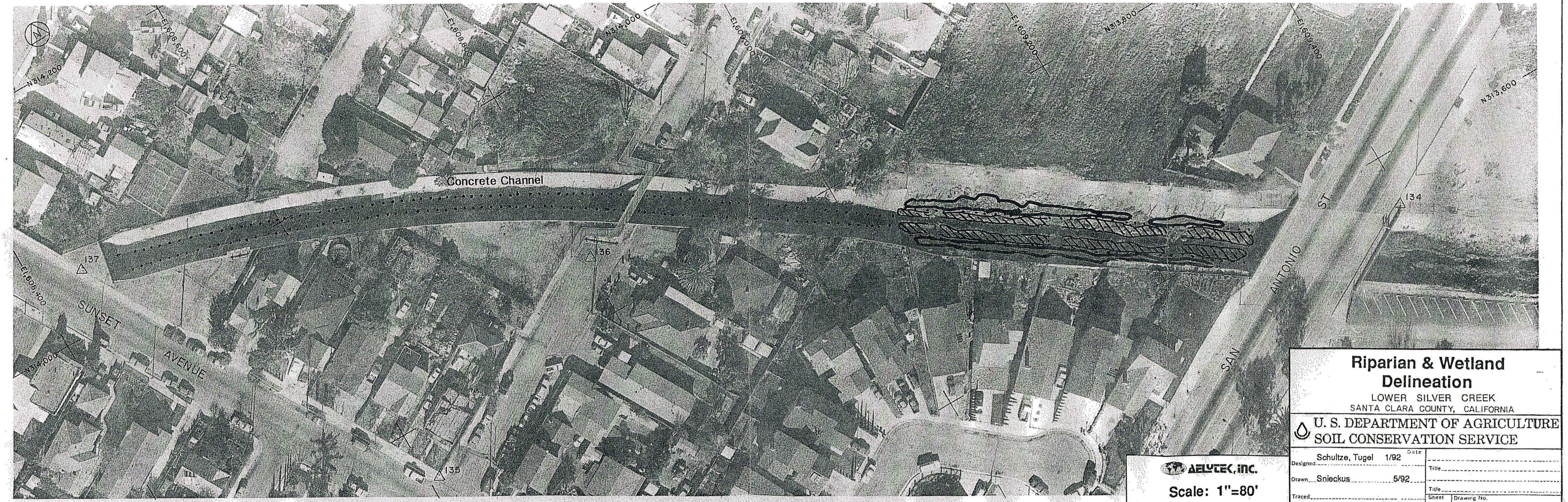

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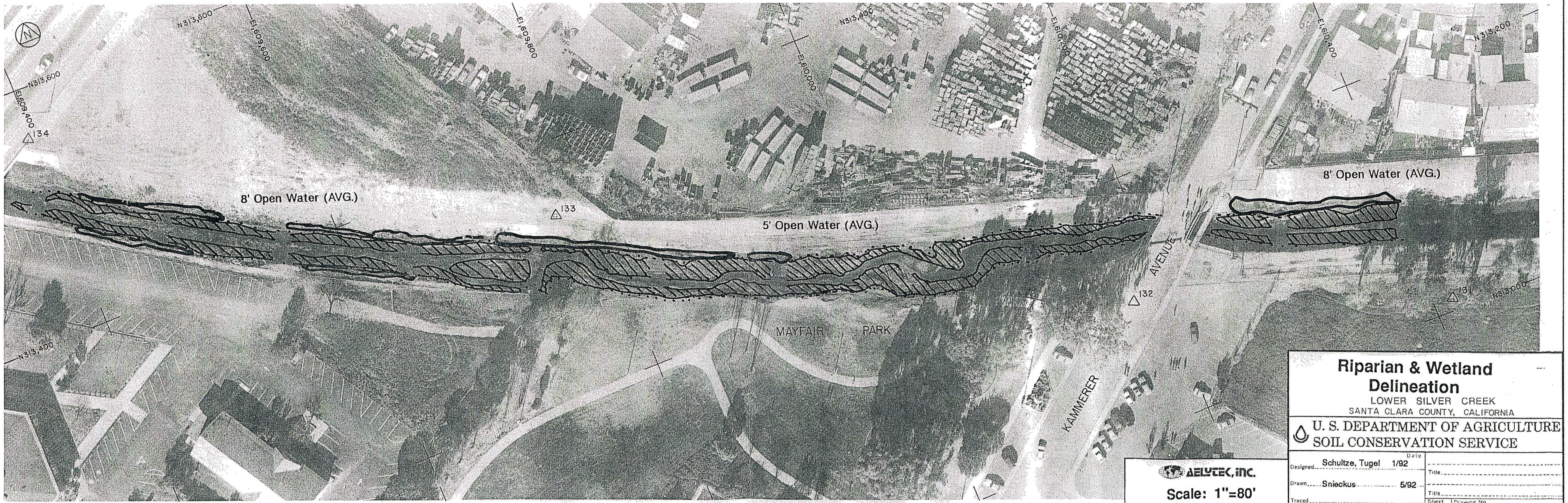

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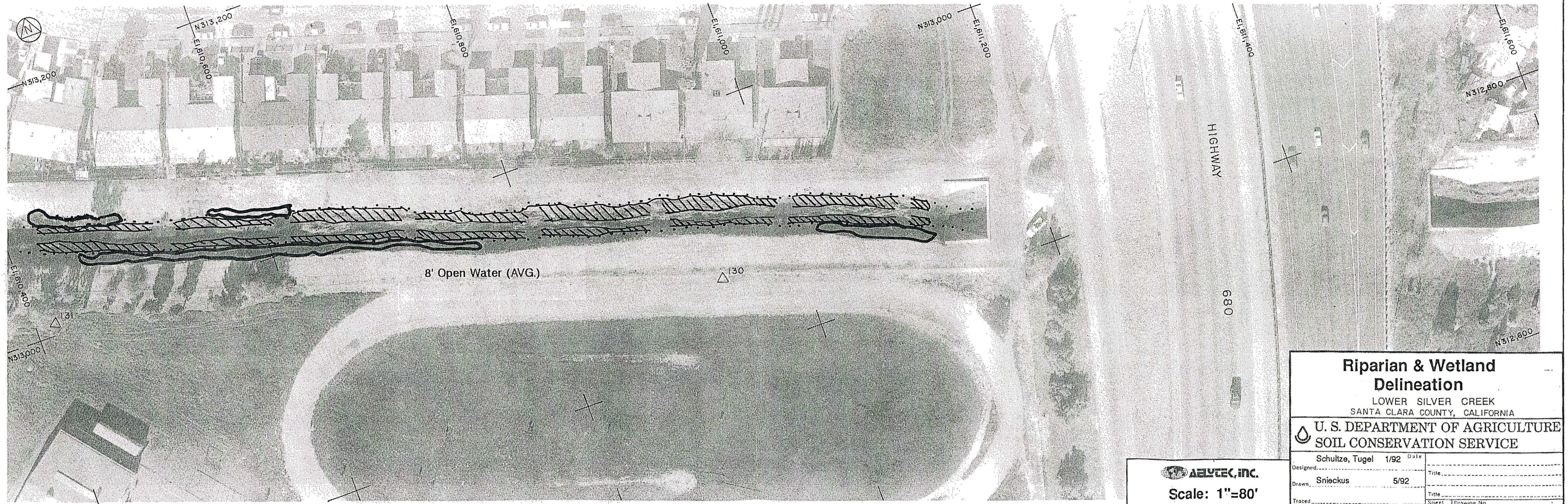

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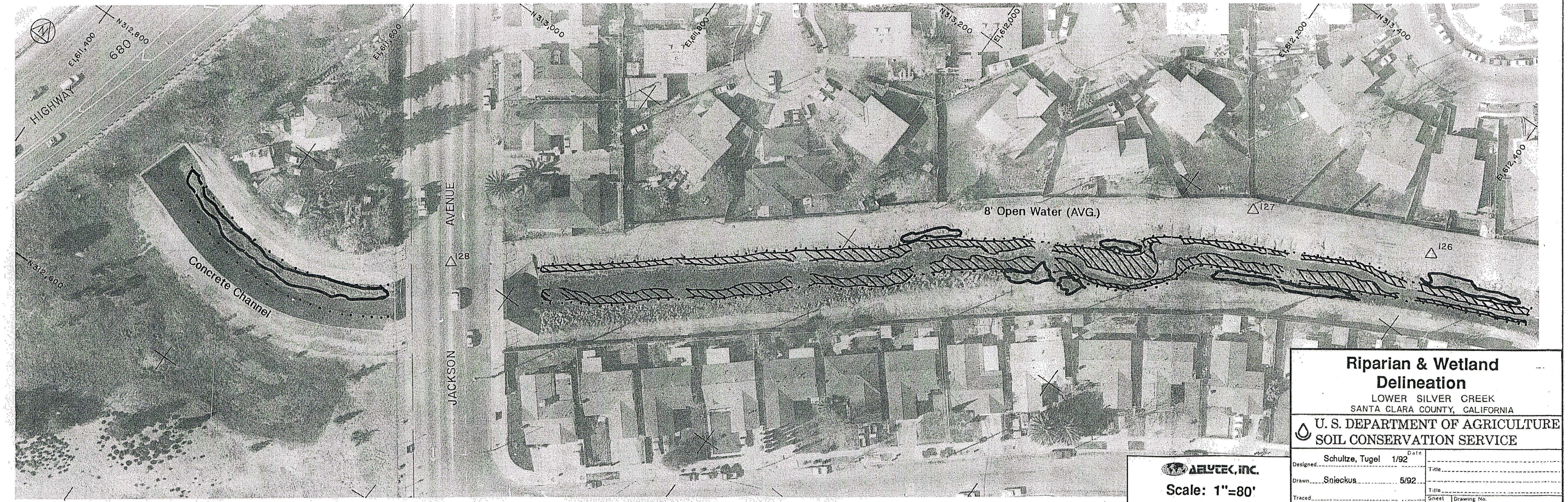

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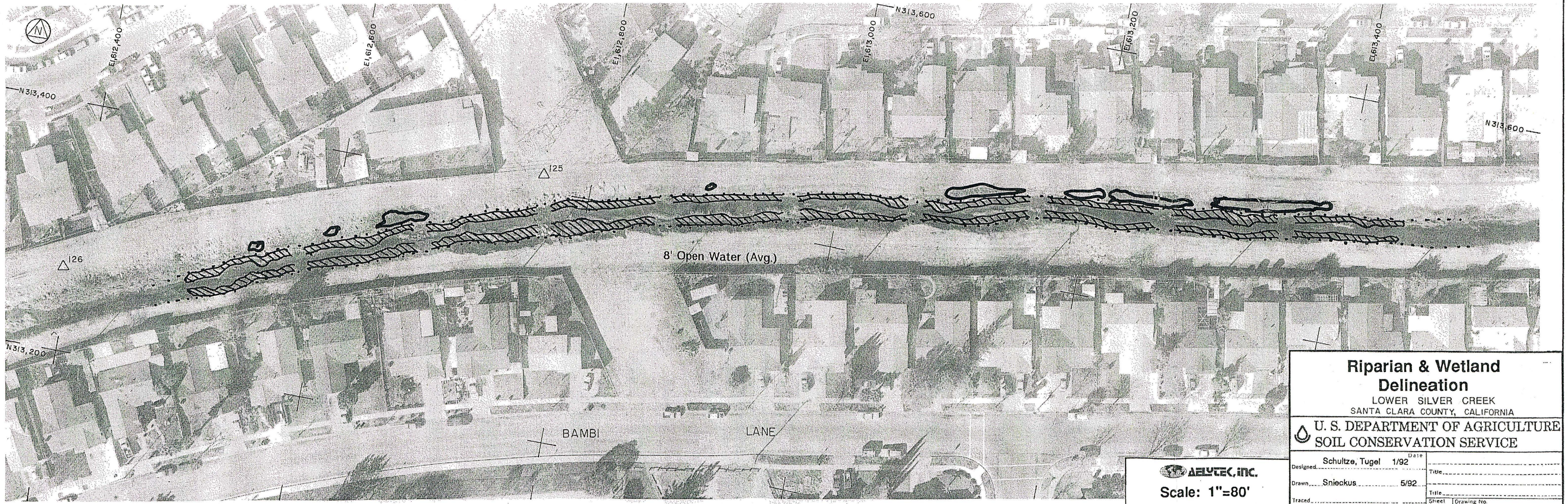
7319



AELYTEK, inc.
Scale: 1"=80'
DATE OF PHOTOGRAPHY: FEBRUARY 4, 1988

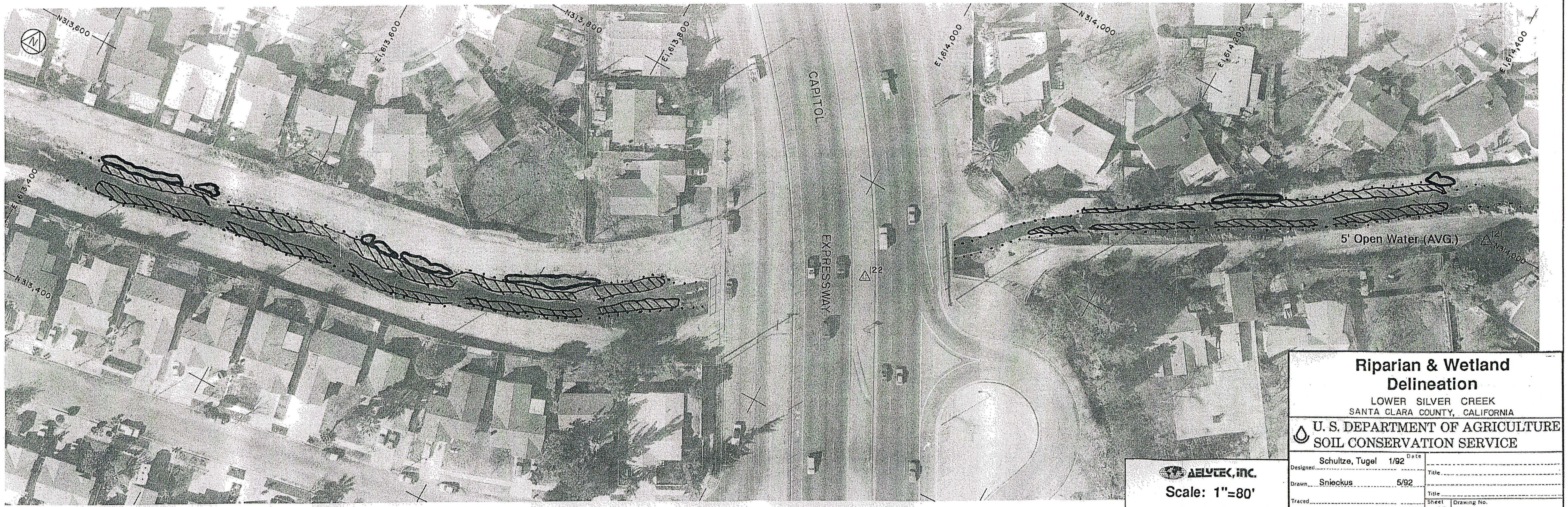
Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

		Date	
Designed	Schultze, Tugel	1/92	Title
Drawn	Snieckus	5/92	Title
Traced			Sheet No. 14 of 23 — Drawing No.
Checked			

7319



AELUTEC, INC.

Scale: 1"=80'

DATE OF PHOTOGRAPHY:FEBRUARY 4,1988

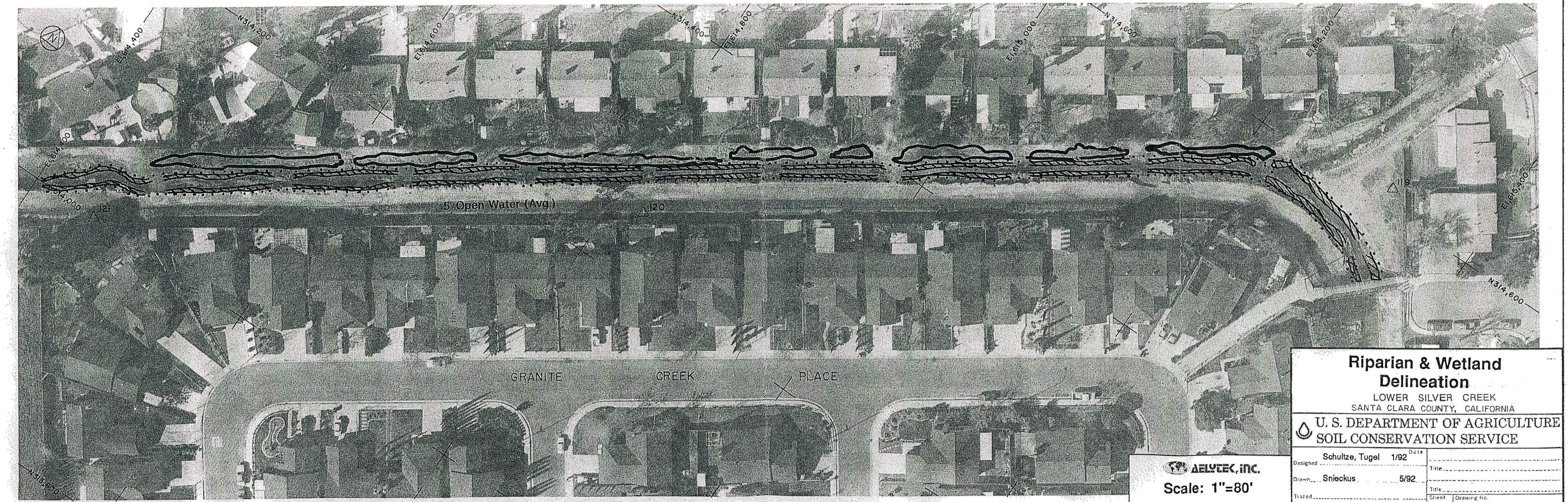
Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed Schultze, Tugel Date 1/92
Drawn Snieckus 5/92
Traced
Checked
Title
Title
Sheet No 15 of 23
Drawing No.

7319



Riparian & Wetland Delineation

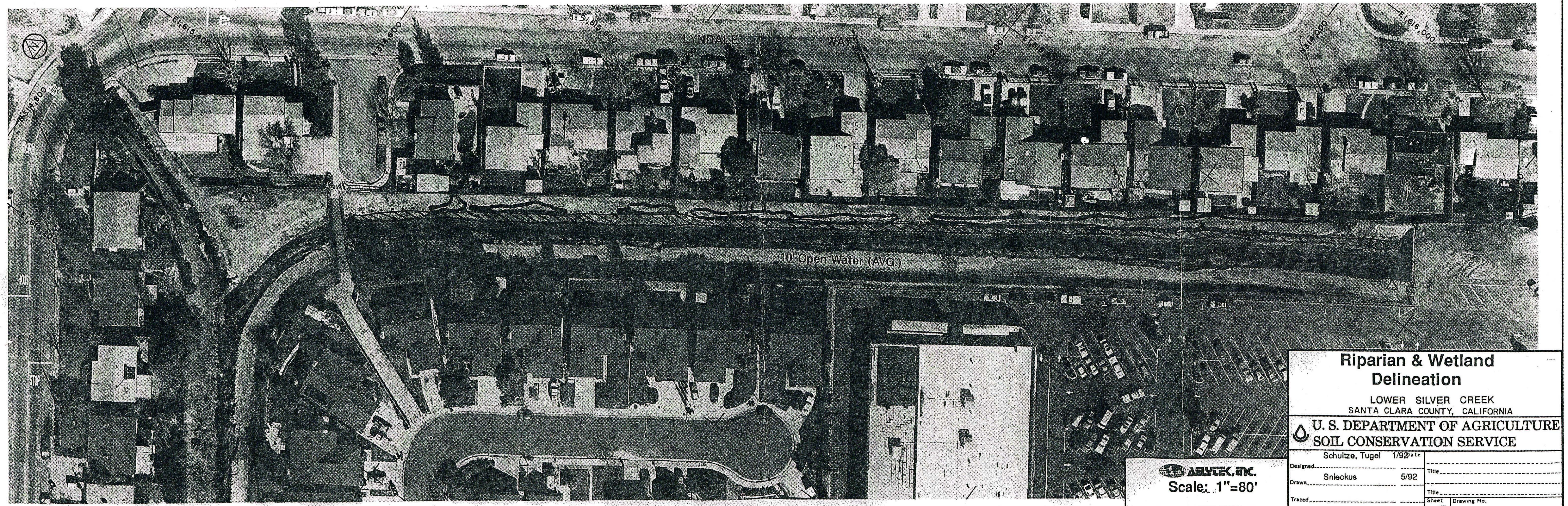
LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

AELYTEK, INC.
Scale: 1"=80'
DATE OF PHOTOGRAPHY:FEBRUARY 4,1988

Designed	Schultze, Tugel	Date 1/92	Title
Drawn	Snieckus	5/92	Title
Traced			Sheet No. 16 of 23
Checked			Drawing No.

7319



AERTEK, INC.

Scale: 1"=80'

DATE OF PHOTOGRAPHY: FEBRUARY 4, 1988

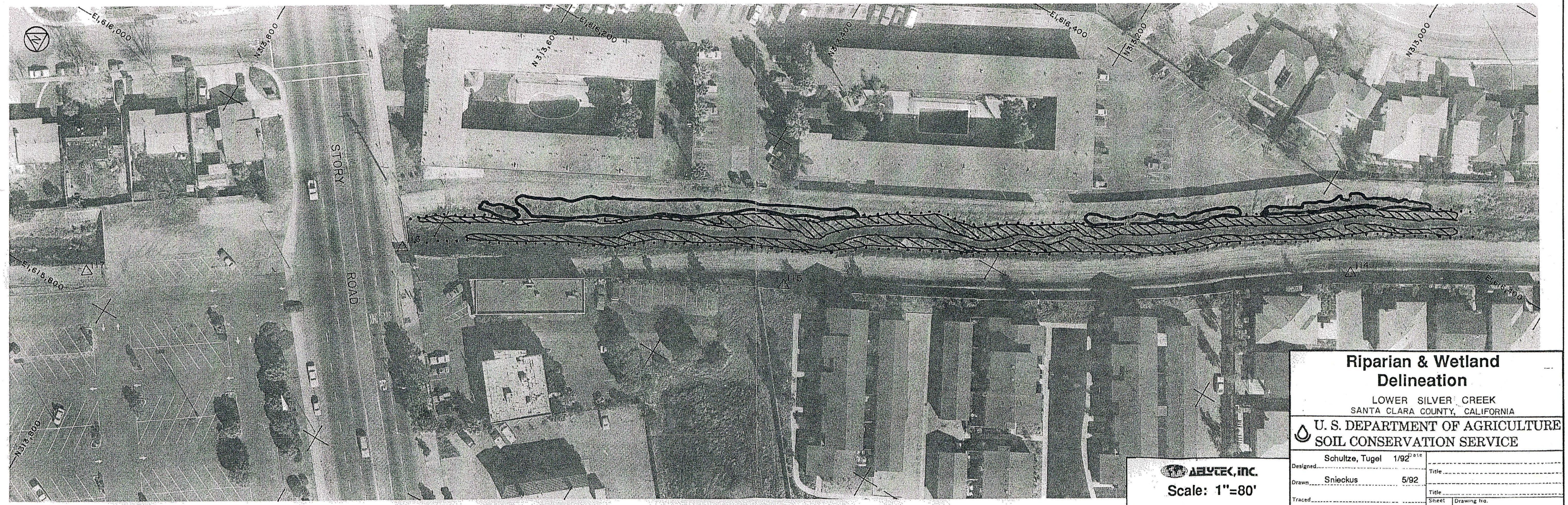
Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

		Date	
Designed	Schultze, Tugel	1/92	Title
Drawn	Snieckus	5/92	Title
Traced			Sheet No 17 of 23 · Drawing No.
Checked			

7319



AEROTEK, INC.

Scale: 1"=80'

DATE OF PHOTOGRAPHY: FEBRUARY 4, 1986

Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed Schultze, Tugel	Date 1/92	Title
Drawn Snieckus	5/92	Title
Traced		Sheet No 18 of 23 / Drawing No.
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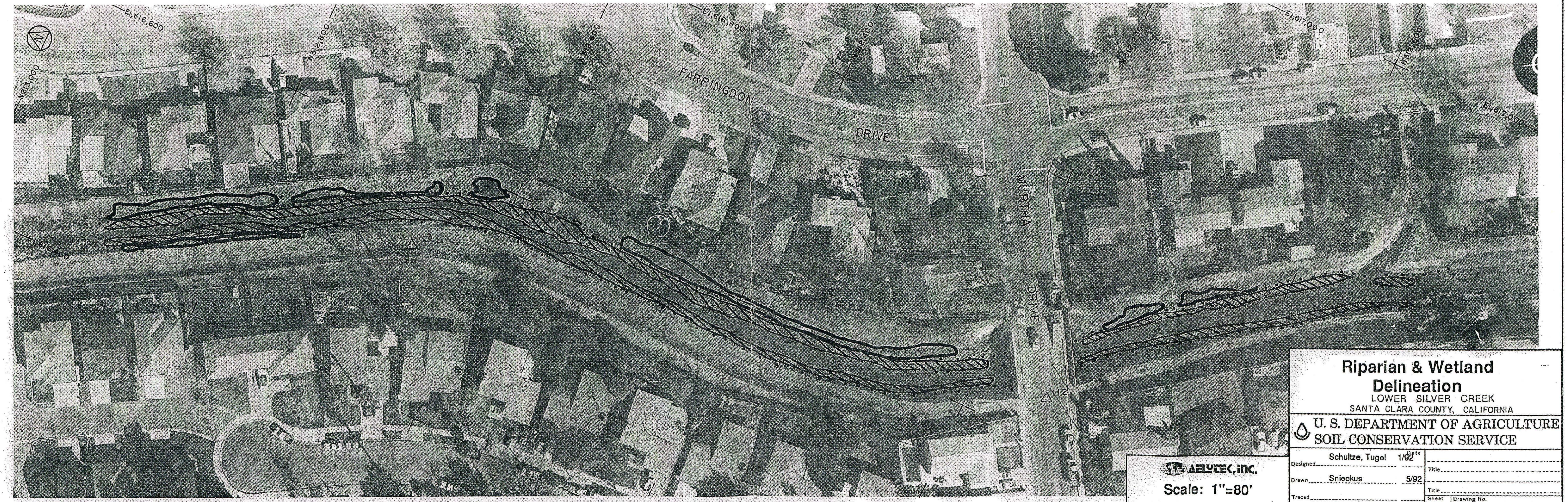


AELYTEK, INC.

Scale: 1"=80'

DATE OF PHOTOGRAPHY:FEBRUARY 4,1988

Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

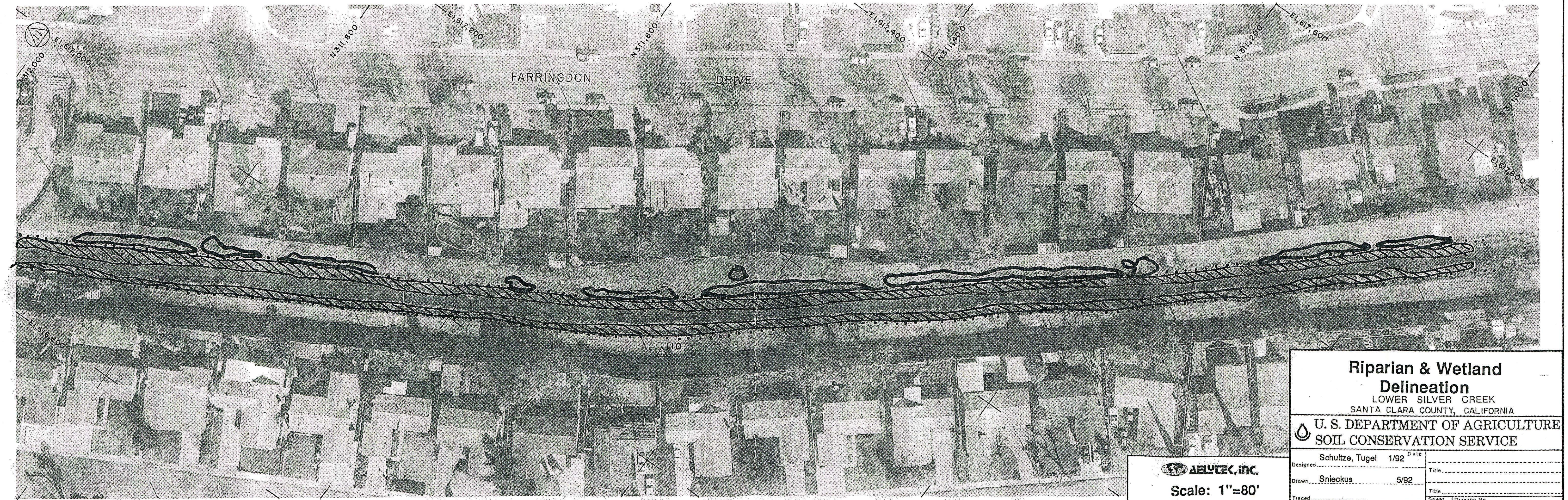
Designed	Schultze, Tugel	Date 1/92
Drawn	Snieckus	5/92
Traced		
Checked		

Title

Title

Sheet	Drawing No.
No 19 of 23	

7319



Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

AELYTEK, INC.
Scale: 1"=80'
DATE OF PHOTOGRAPHY: FEBRUARY 4, 1988

	Name	Date	
Designed	Schultze, Tugel	1/92	
Drawn	Snieckus	5/92	Title
Traced			Title
Checked			Sheet No 20 of 23 — Drawing No.

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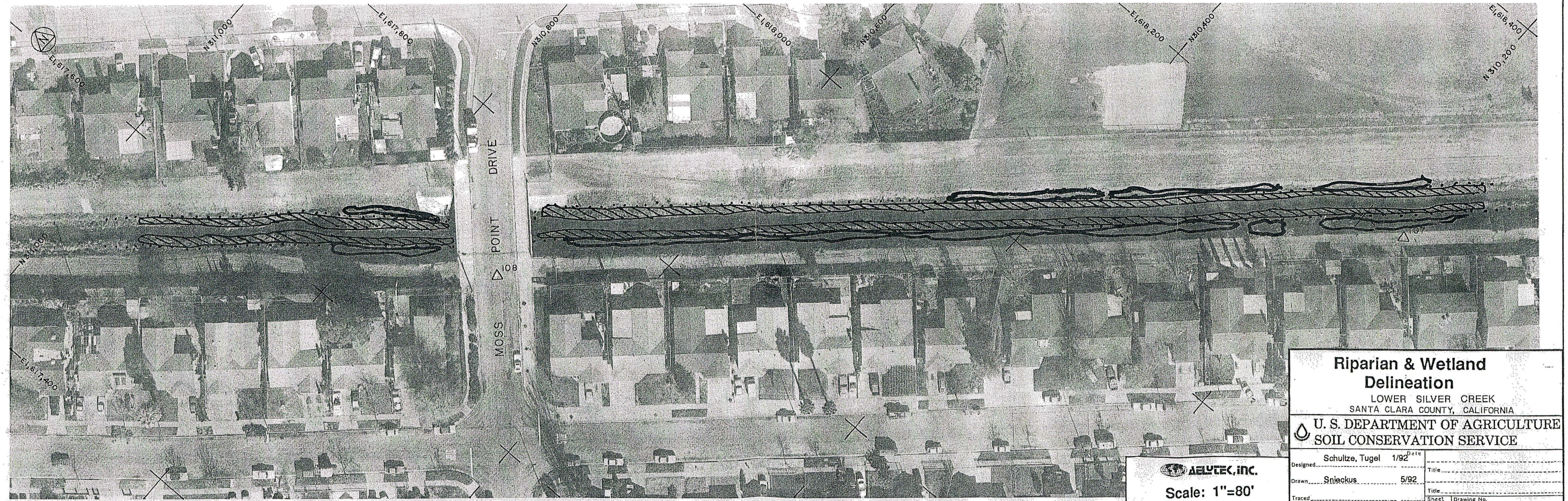


Riparian & Wetland Delineation

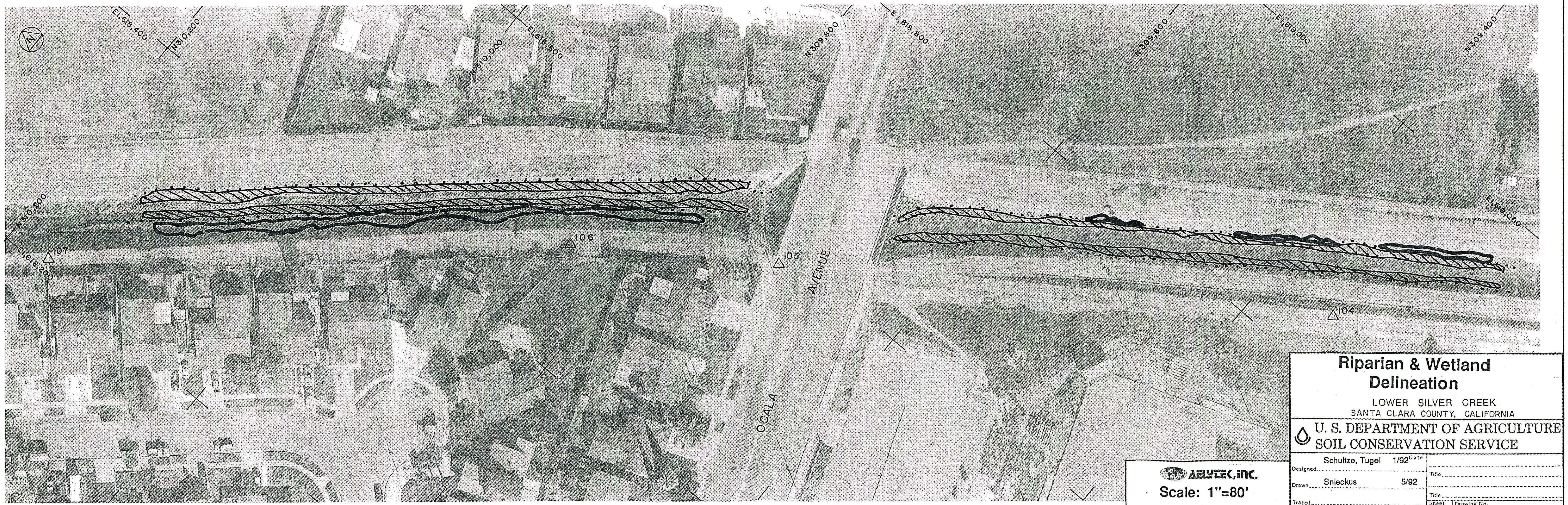
LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

AERO-TEC, INC.
Scale: 1"=80'
DATE OF PHOTOGRAPHY: FEBRUARY 4, 1988

Designed	Schultze, Tugel	Date 1/92	Title
Drawn	Snieckus	5/92	Title
Traced			Sheet No 21 of 23 / Drawing No.
Checked			

7319



Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed Schultze, Tugel	Date 1/92	Title
Drawn Snieckus	5/92	Title
Traced		Sheet No 22 of 23 · Drawing No.
Checked		

AEROTEK, INC.
Scale: 1"=80'
DATE OF PHOTOGRAPHY: FEBRUARY 4, 1988

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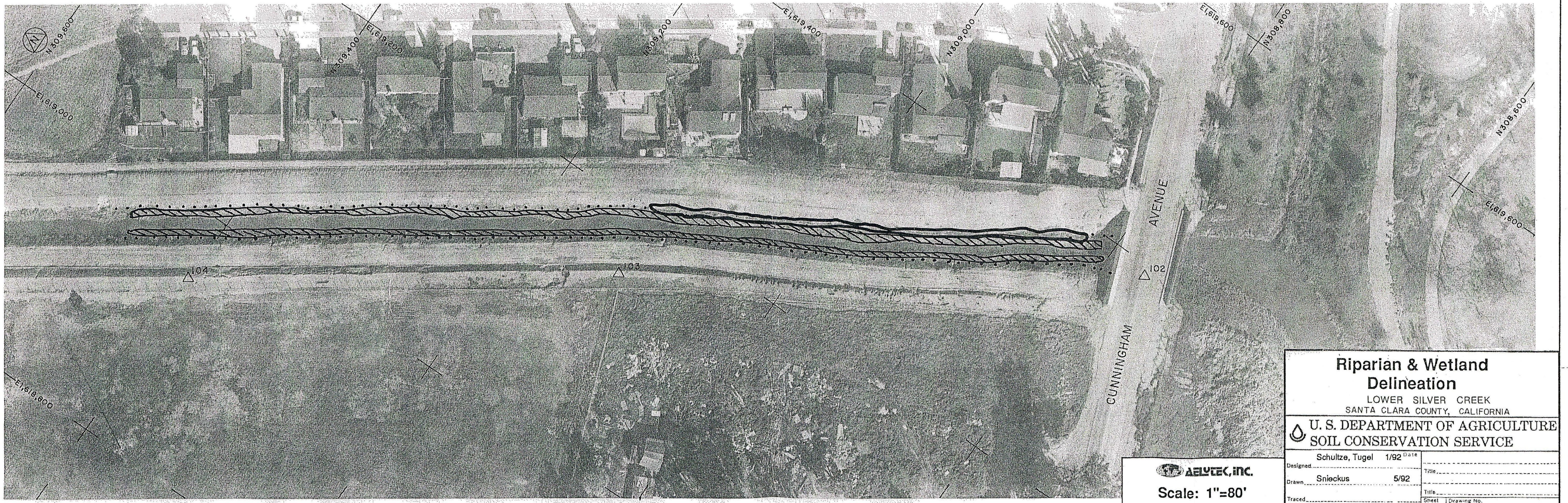


AELYTEC, INC.

Scale: 1"=80'

DATE OF PHOTOGRAPHY:FEBRUARY 4,1988

Riparian & Wetland Delineation

LOWER SILVER CREEK
SANTA CLARA COUNTY, CALIFORNIA

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed	Schultze, Tugel	1/92 Date
Drawn	Snieckus	5/92
Traced		
Checked		

Title
Title

Sheet No 23 of 23

Drawing No.

7319

APPENDIX B

United States
Department of
Agriculture

Soil
Conservation
Service

2121-C 2nd St., Ste. 102
Davis, CA 95616-5475
(916) 449-2870

Subject: SOI - Hydric Soils Determinations
for Lower Silver Creek

Date: February 3, 1992

To: Ron Schultze, State Biologist, SCS,
Davis, California

File Code: 430-19

Enclosed is the documentation for the hydric soil determinations made for the Lower Silver Creek watershed project on January 14 and 15. The hydric soils criteria used is dated June, 1991. A copy is attached.

Arlene J. Tugel

ARLENE J. TUGEL
Acting State Soil Scientist

cc: w/o attachment
Monte J. Collins, Asst. State Conservationist (WR), SCS, Davis, CA
Luana Kiger, State Resource Conservationist, SCS, Davis, CA
Robert Snieckus, Landscape Architect, SCS, Davis, CA
Glenn Wilcox, Area Biologist, SCS, Salinas, CA

Soil Type

Field Symbol

Photo No.

Area Lower Silver Ck

Data 1-4-92

Stop No. 27+00

Location 21+00 to 41+00

By ADT

Classification

Climate P. T. J. J.

Vegetation

Parent Material bank cut : —

Physiography lower benched bank H3 + 4

Relief

Slope

Aspect

Elevation

Drainage H3: P H4: P

Permeability

Runoff

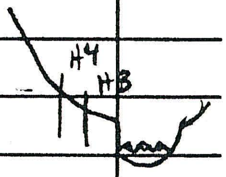
Erosion

Moisture

Gr. Water

Salt or Alkali

Stoniness

Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO3	Boundary	Other Features
		Dry	Moist			D	M	W						
	0–4"		2.5Y4/1 – 40% 2.5Y4/2 – 60%	L – L	organic staining				no oxidized rhizo					
H3	14"–25	reductimorphic	2.5Y4/3 – 70% N5/0 – 10% 7.5YR4/6 – 10%	SICL										shells
wkit			N2/1 – 10%											
	25"–60"	"	2.5Y4/2 – 40% N5/0 – 20% 2.5Y4/3 – 40%	SICL w/thin L	SB									assume uniform om decre
	H2O Table @ 58"				bermuda grass & some berry vines									
	site is ~5' f/creek bank				f, m, t Aeric Haplaquent; hydric = 2b(3)									
H4	0–4"	~	2.5Y4/1 – 40% 2.5Y4/2 60%	~organic staining L					no oxidized rhizo.					
	18+	reductimorphic	2.5Y4/3 85% N5/0 10%	SICL										
			7.5YR4/6 5%											
	4–18"		2.5Y4/2	L										

this site is 7' from bank and is upper bdy of hydric soil at its widest point

H2O > 5'; bermuda grass and upland annual grasses

Aeric Haplaquent; hydric

Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

Soil Type | Field Symbol | Photo No.

Area | Data 1-14-92 | Stop No. 5+00

Location L. Silver Cr. 2+00 thru 10+00 | By DST

Classification | Climate P. T. J. J.

Vegetation H1 overwashed + cattails #2 grasses H2 overwashed deposit on higher F

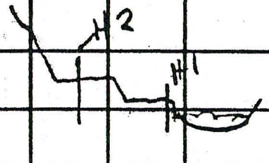
Parent Material channel alluvium H1 + H2 | Physiography H1 - overwashed deposit in chann

Relief | Slope | Aspect | Elevation

Drainage H1: VP H2: SP | Permeability | Runoff | Erosion

Moisture | Gr. Water | Salt or Alkali | Stoniness

Horizon	Depth inches	Color (including mottles) Dry	Color (including mottles) Moist	Texture	Structure	Consistance D	Consistance M	Consistance W	Roots	Pores	Clay Films	pH & CO3	Boundary	Other Features
H1 wht	0-6"		2.5Y4/2 FID7.5YR46	S.L					3BF 1M				AS-10% FGR Brick frag.	
	6"-20"	reductimorphic	5Y4/2-40% N4/0 40% 5Y4/3-20%	SICL 3B					3MF 1M	(6-10")			10% GR + Brick frag.	colors exchange on exposu to air
	20"-40"	〃	〃	SR-SICL-SIL										
Water table	@ 4"		site 1 ft from edge of bank; Aeric Fluvaquent; hydric = 2b(3) hydric soil 4 ft wide; channel deposit over burred cattails											
H2	0-23"		2.5Y4/2 No Mott.	S.L.										No oxidized rhizospheres
	23"-25		2.5Y4/2-80% 2.5Y4/1-20%	SICL										
	25-48"	reductimorphic	2.5Y42-40% N50-30% 7.5YR46-30%	SICL										
	25-2[illegible]		〃											
Water table	@ 48"		f,m, thermic Aquic Xerofluvent; Not hydric											
		site 5' from edge of bank in channel deposits												



Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 1970

1/14/9

Soil Type		Field Symbol	Photo No. –
Area Lower Silver Creek		Data 1-14-92	Stop No. 47+00
Location 41 – 51+00			By Dat
Classification berry bushes to McKee Bridge		Climate P. T. J. J.	
Vegetation cattails + bermuda grass			
Parent Material channel alluvium		Physiography toeslope of steep bank	
Relief	Slope	Aspect	Elevation
Drainage VP	Permeability	Runoff	Erosion
Moisture	Gr. Water	Salt or Alkali	Stoniness

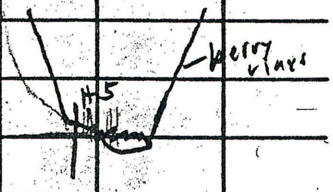
Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO3	Boundary	Other Features
		Dry	Moist			D	M	W						
	0-9"		2.5Y4/2	L					no-oxidized					
H5	9-15"		2.5Y4/2 - 60% 2.5Y4/1 - 40%	L organic staining					↓					
wkst	15-20"	reductimorphic	5G4/1 no mottles	L					↓	Colors change on exposure to air				No mottles

H2O table @ 13"   Aeric Fluvaquent; hydric = 2b (3)

site 3' from bank edge; hydric soil 5' wide at site

photo 25, 26

steep banks w/ narrow band of hydric soils in channel and along lower beveled edge. No benches. Some sloughing of bank has occurred.



Form CF 123 A – Soil Description 6/1/64 USDA-SCS Davis, California.

Soil Type

Field Symbol

Photo No.

Area Lower silver Cnk

Data 1-15-92

Stop No. 61+00

Location Plata Arroyo Park 60+00 to 66+00

By AST

Classification

Climate P. T. J. J.

Vegetation

Parent Material H6, H8 channel alluvium

Physiography flood plain – H6, H8

Relief

Slope < 1

Aspect

Elevation

Drainage H6: P H7-P H8 P

Permeability

Runoff

Erosion

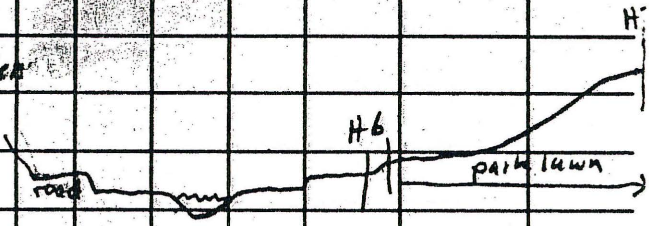
Moisture

Gr. Water

Salt or Alkali

Stoniness

Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO₃	Boundary	Other Features
		Dry	Moist			D	M	W						
H6	0-10		2.5Y 5/2 95 7.5YR 4/4 5	→ sl	organic stains				no oxidized					
wht	10-16		2.5Y 5/2 80 2.5Y 5/1 15 7.5YR 4/6 5	SRL-sl										
	16-27	reductimorphic	2.5Y 5/3 65 7.5YR 4/4 30 N 5/0 5	LS										clean sa[illegible] grains
	27-32	"	N 4/0 50 2.5Y 4/2 35 7.5YR 4/6 15	SR sicl-L-sl										
		site 23' from bank			Aeric Fluvaquent					hydric = 2b(3)				
	H₂O	at 32"	veg=	bermuda grass;					observation site at widest section of floodplain. this soil extends to 28' from water edge.					
H7	0-7		2.5Y 4/3 55 10YR 4/1 45	mixed c	overburden									
	7-15		10YR 4/1 80 N 3/0 20	c										
	15-20"	reductimorphic	N 3/0 78 2.5Y 4/2 20 7.5YR 4/4 2	c										
		photo 25, 26			Pelloxerert					hydric = 2b(3) now drained.				
		site at fence btwn homes and edge of park boundary about 300' from channel veg: eucalyptus												
					Aer[illegible] Fluva[illegible]					hy[illegible] 2b[illegible]				

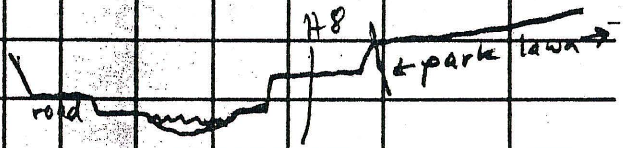


Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 1976

Soil Type
Field Symbol
Photo No.
Area Lower Silver Ck
Data
Stop No. 57+00
Location Plata Arroyo Park 53+50 – 60+00
By AST
Classification
Climate P. T. J. J.
Vegetation mostly grasses at site; (cattails below this bench)
Parent Material channel alluvium
Physiography floodplain
Relief
Slope
Aspect
Elevation
Drainage P
Permeability
Runoff
Erosion
Moisture
Gr. Water
Salt or Alkali
Stoniness

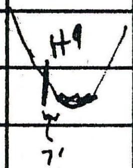
Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO3	Boundary	Other Features
		Dry	Moist			D	M	W						
H8	similar to H6, but lack 65 layer													
		H_2O at >5'			Aeric Fluvaquents						hydric 2b (3)			
		site 7' from water edge.						(down stream from footbridge)						
		photo #27												



Form CF 123 A – Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 1976

Soil Type
Field Symbol
Photo No.
Area Lower Silver Ck
Data 10-15-92
Stop No. 75+00
Location 66+00 to 80+00
By DLT
Classification
Climate P. T. J. J.
Vegetation bermuda
Parent Material H9- channel alluvium over bank cut
Physiography
Relief
Slope
Aspect
Elevation
Drainage
Permeability
Runoff
Erosion
Moisture
Gr. Water
Salt or Alkali
Stoniness

Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO_3	Boundary	Other Features
		Dry	Moist			D	M	W						
H9	0-15		2.5Y 4/1 60 2.5Y 4/2 40	l	- organic stain									
wkst	15-18		2.5Y 4/2 98 7.5YR 4/6 2	SR by LS										
	18-38	reductimorphic	2.5Y 5/2 95 2.5Y 5/1 3 7.5YR 4/6 2	SR-L SICL										
	38+	H2O	gleyed-	sicl		Aeric Fluvaquent						hydric = 2b(3)		
			2.5Y 4/2 20 2.5Y 4/1 60											
			5B 6/1 20											
		H2O at 38"												
		photo #30												
		site 4' from bankedge; hydric to 7' from bank												
		(cut finger)												

Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 1976

Soil Type

Field Symbol

Photo No.

Area Lower Silver Ck

Data 10-15-92

Stop No. 111+00

Location May fair park site 109+00 to 114+00

By AJT

Classification

Climate P. T. J. J.

Vegetation bermuda

Parent Material channel alluvium

Physiography flood plain

Relief

Slope

Aspect

Elevation

Drainage P

Permeability

Runoff

Erosion

Moisture

Gr. Water

Salt or Alkali

Stoniness

Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO3	Boundary	Other Features
		Dry	Moist			D	M	W						
H 10'	0-8		2.5Y 4/2	SL										
wkut	8-13		2.5Y 4/2 85 2.5Y 4/1 15	sl	organic staining									
	13-18		2.5Y 5/3 98 7.5YR 4/6 2	LS										
	18-25	reductimorphic	2.5Y 4/2 60 2.5Y 4/1 38	LS										some clean sand grains
	~~25~~		7.5YR 4/6 2 10YR 4/1 1											
	25			L	Aeric Fluvaquent						hydric		-2b(3)	
		A₂O at 31"												

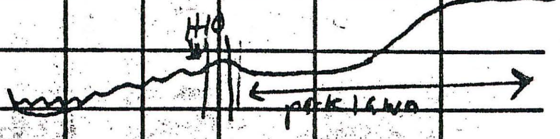
Note - entire park to upper lawn bdry is a hydric Pelloxerert

similar to # H7

site about 10' from bank at base of berm; upslope of berm is park lawn

photo 31, 32

Park lawn is in truncated Pelloxererts



Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 1976

Soil Type | Field Symbol | Photo No.

Area lower silver Ck | Data 1-15-92 | Stop No. 121+00

Location 121+00   100+70 to 153+50 excluding 109+00 to 114+00 and concrete | By AGT

Classification | Climate P. T. J. J.

Vegetation cattails

Parent Material channel alluvium | Physiography floodplain

Relief | Slope | Aspect | Elevation

Drainage VP | Permeability | Runoff | Erosion

Moisture | Gr. Water | Salt or Alkali | Stoniness

Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO3	Boundary	Other Features
		Dry	Moist			D	M	W						
H11	0-7		2.5Y 3/1 65 2.5Y 4/2 35	L	organic streaks									
what	7-15	reductimorphic	2.5Y 4/2 80 2.5Y 4/1 18	L					yes oxidized rhizospheres					
			7.5YR4/6 2											
	15-20		2.5Y 5/2 85 2.5Y 4/1 5	sicl										
			7.5YR 4/6 10											
-	20+	gleyed	5GY 4/1	sicl										

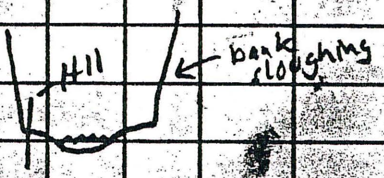
H2O at 17"   Aeric Fluvaquents; hydric 2b(3)

site 4' from bank edge; hydric about 5 feet wide

Alot of bank sloughing and very steep banks in this reach,

photo 33 34

used board to cross creek above Mayfair Park (before lunch)



Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 1976

Soil Type | Field Symbol | Photo No.

Area lower Silver Ck | Data 1-15-92 | Stop No. 162+00

Location 156+00 to 170+00 | By Ast

Classification | Climate P. T. J. J.

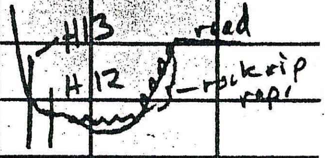
Vegetation cattails and barnyard grass

Parent Material channel alluv. | Physiography flood plain

Relief | Slope | Aspect | Elevation

Drainage VP | Permeability | Runoff | Erosion

Moisture | Gr. Water | Salt or Alkali | Stoniness

Hori-zon	Depth	Color (including mottles)		Tex-ture	Struc-ture	Consistance			Roots	Pores	Clay Films	pH & CO3	Boundary	Other Features
		Dry	Moist			D	M	W						
H12	0-2		2,5Y 4/1	sl										
wkt	2-10		2.5Y 4/3 50 2.5Y 4/1 45	l	— organic staining									
			7.5YR 4/6 5											
	10-15	reductimorphic	2.5Y 4/2 50 2.5Y 4/1 40 7.5YR 4/6 10	cl										
	15+		hit rock	of	rock rip rap.									
		H2O table @ 14"			Aeric Fluvaquent ; hydric 2 b (3)									
		2' from bank edge												
														
H13	0-9		2,5Y 4/2 2,5Y 3/1	mixed sl	channel allu over									
	9-14		2.5Y 4/2 70 2.5Y 6/1 20	sil	bank cut material — relict mottles below 9"									
			7.5YR 4/6 10											
	14-20"		2.5Y 5/2 40 2.5Y 6/1 30	sil	Note — this layer same redoximorphic									
			7.5YR 4/6 30		features as material in exposed bank									
	site 5' from bank edge				4 to 10' above water edge. These are									
				relict features from soil formed on original										
				surface before channel was excavated,										

Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 197

Soil Type	Field Symbol	Photo No.
Area Lower Silver Ck	Date 1-15-92	Stop No. 240+00
Location 170+00 to 244+00		By AH
Classification	Climate P. T. J. J.	

Vegetation rabbits foot grass, smartweed (cattails below bank in channel)

Parent Material fill material in road bank	Physiography bank cut

Relief	Slope	Aspect	Elevation
Drainage P	Permeability	Runoff	Erosion
Moisture	Gr. Water	Salt or Alkali	Stoniness

Horizon	Depth	Color (including mottles)		Texture	Structure	Consistance			Roots	Pores	Clay Films	pH & CO_3	Boundary	Other Features
		Dry	Moist			D	M	W						
H14	0-4		2.5Y 4/2	l										
wet	4-19		2.5Y 4/2 95 5YR 4/6 5	sl										
	19+	reductimorphic	2.5Y 4/2 90 5YR 4/6 5	l										
			N 4/0 5											

H_2O at 19"

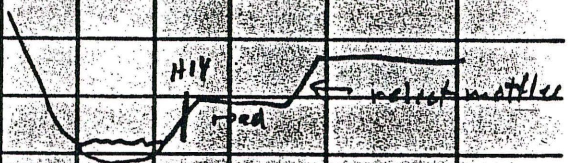
site 3' from bank/water edge on bank cut, rabbits footgrass on bank at site

Hydric soil 3' wide here

Aeric Haplaquent – hydric soil (2b3)

photos 6-9 new roll

relict mottles in road cut 5' above site on other side of road



Form CF 123 A - Soil Description 6/1/64 USDA-SCS Davis, California.

USDA-SCS-PORTLAND, OR. 1970

LOWER SILVER CREEK WETLANDS

Wetlands and Open Water

REACH	SECTION	DISTANCE	WIDTH OF (ft.) WETLAND	WIDTH OF (ft.) OPEN WATER	AREA OF (sq. ft.) WETLAND	AREA OF (sq. ft.) OPEN WATER
1a	2+00 - 10+00	800	6	5	4800	4000
1b, 1c	10+00-18+00	800	4	10	3200	8000
Hwy 101	18+00-21+00	300	existing concrete culvert		0	0
1c,1d, 2	21+00-41+00'	2000	6	12	12000	24000
2	41+00-51+00	1000	6	12	6000	12000
King Rd	51+00-53+50	250	existing concrete culvert		0	0
3a	53+50-60+00	550	18	5	9900	2750
3a	60+00-66+00	600	32	4	19200	2400
3a, 3b	66+00-80+00	1400	14	7	19600	9800
3c	80+00-100+70	2070	existing concrete channel		0	0
3d	100+70-103+00	230	11	8	2530	1840
S.Anton.	103+00-105+00	200	existing concrete culvert		0	0
3d, 3e	105+00-109+00	400	11	8	4400	3200
3e	109+00-114+00	500	23	5	11500	2500
3f	114+00-123+00	900	11	8	9900	7200
Hwy 680	123+00-127+00		existing concrete culvert		0	0
4a	127+00-130+00		existing concrete channel		0	0
Jackson	130+00-131+00		existing concrete culvert		0	0
4b	131+00-153+50	2250	11	8	24750	18000
Capitol	153+50-156+00	250	existing concrete culvert		0	0
4c	156+00-170+00	1400	3	5	4200	7000
5,6	170+00-244+00	7400	10	10	74000	74000
				TOTAL	205980	176690
					4.7 acres	4.1 acres

Average Wetland Width = 8.5 ft.

Average Open Water Width = 7.3 ft.

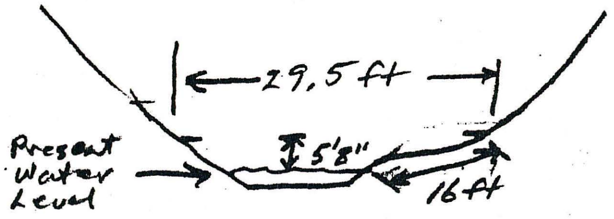
Table 1

Lower Silver Creek 1-15-92

Recent High Flow Measurements

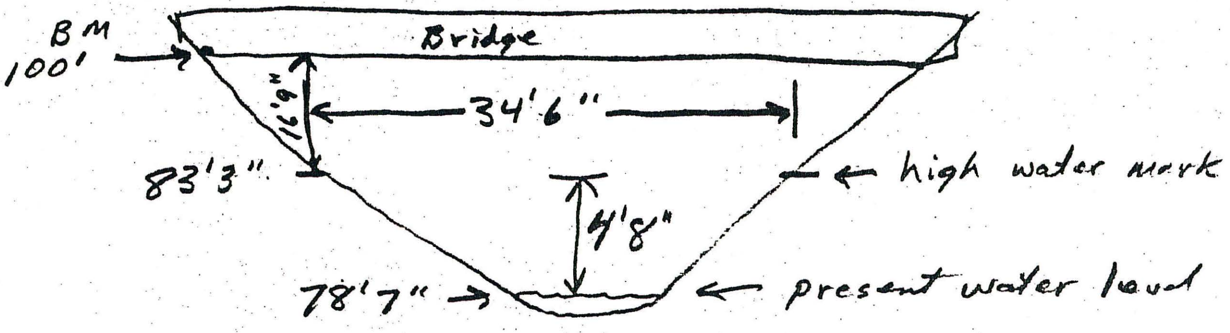
Station: 5+00

16 ft water level to high water mark
29.5 ft High water - bank to bank
5'8" Todays water level to high water



Wooster Ave. Bridge
At Bench Mark 209, Elev. 100

78'7" Elev of present water level
83'3" Elev of high water mark
34'6" Width at high water mark



United States Department of Agriculture

Soil Conservation Service

WETLAND DETERMINATION

APPLICANT NAME: Santa Clara Valley Water District/SCS APPLICATION NUMBER: ____ PROJECT NAME: Lower Silver Creek W.S.

STATE: ____ COUNTY: ____ LOCATION: L. Silver Creek

DATE: 1-14-92 PLOT NO.: 5+00 SECTION: 2+00 to 10+00

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1. Willow (S. sp.)	5	OBL	11. Cattail (T. domingensis)	90	OBL
2.			12.		
3.			13.		
4.			14.		
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 95. Other indicators: ____

Hydrophytic vegetation: Yes ✓ No ___. Basis: ____

SOIL

Series and phase: inclusion On Hydric Soils List? Yes ___ No X

Mottled: Yes X No ___. Mottle color: 5Y 4/3. Matrix color: N 4/0

Gleyed: Yes X No ___ Other indicators: colors change on exposure to air

Hydric soils: Yes ✓ No ___ Basis: 2b(3) June 1991 criteria H_2O at 4"

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water: ____

Saturated soils: Yes ___ No ___ Depth to saturated soil: ____

Other indicators: ____

x Wetland hydrology: Yes ___ No ___ Basis: ____

Y Atypical situation: Yes ___ No ___

x Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: Yes | W 3ft | OW 5ft | W 3ft | W = Wetland OW = Open Water

COMMENTS: H1/ Narrow band of wetland on both sides of stream. Average stream width 3 feet. Wetland ranges from 0 to 4 ft on each side; average = 3 ft each side

H2 Upland grasses approach edge of low flow channel in some spots. Non-hydric soil

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DETERMINED BY: R. Schultze, A. Tugel, B. Snieckus, B. Strief, G. Wilcox

United States Department of Agriculture

Soil Conservation Service

WETLAND DETERMINATION

APPLICANT NAME: Santa Clara Valley Water District/SCS
APPLICATION NUMBER:
PROJECT NAME: Low[illegible] Creek W[illegible]

STATE: CA COUNTY: Santa Clara LOCATION: L. Silver Creek

DATE: 1-15-92 PLOT NO.: Ocular Estimate SECTION: 10+00 to 28+00
18+00 to 21+00 Concrete lined under Hwy 101

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1. Willow (Salix sp.)	5	OBL	11. Cattail (T. latifolia)	95	OBL
2.			12.		
3.			13.		
4.			14.		
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 100. Other indicators:
Hydrophytic vegetation: Yes ✓ No ___. Basis:

SOIL

Series and phase: ___ On Hydric Soils List? Yes ___ No X
Mottled: Yes ___ No ___. Mottle color: ___. Matrix color:
Gleyed: Yes ___ No ___ Other indicators:
Hydric soils: Yes ✓ No ___ Basis: refer to 47+00 site

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water:
Saturated soils: Yes ___ No ___ Depth to saturated soil:
Other indicators:
Wetland hydrology: Yes ___ No ___ Basis:
Atypical situation: Yes ___ No ___
Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: Yes $\overset{w}{2ft}$ / $\overset{ow}{10ft}$ / $\overset{w}{2ft}$ | w = wetland ow = Open Water

COMMENTS: Stream about 10 ft wide, steep banks
very narrow band of wetland about 2 ft on each side average.
Wetland occurs at base of steep banks similar to 47+00 site

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DETERMINED BY:

United States Department of Agriculture

Soil Conservation Service

WETLAND DETERMINATION

APPLICANT NAME: Santa Clara Valley Water District / SCS APPLICATION NUMBER: ____ PROJECT NAME: Lower Silver Creek W. S.

STATE: CA COUNTY: Santa Clara LOCATION: L. Silver Cr.

DATE: 1-14-92 PLOT NO.: 27+00 SECTION: 21+00 to 41+00

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Bermuda (Cynodon dactylon)	85	FAC
2.			12. Hardstem bulrush (S. acutus)	5	OBL
3.			13. Cattail (T. angustifolia)	5	OBL
4.			14. (T. latifolia)	5	OBL
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 100. Other indicators: ____

Hydrophytic vegetation: Yes ✓ No ___. Basis: ____

SOIL

Series and phase: inclusion On Hydric Soils List? Yes ___ No X

Mottled: Yes X No ___. Mottle color: N 5/0. Matrix color: 2.5Y 4/3

Gleyed: Yes ___ No X Other indicators: ____

Hydric soils: Yes ✓ No ___ Basis: 2b (3) - June 1991 criteria

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water: ____

Saturated soils: Yes ___ No ___ Depth to saturated soil: ____

Other indicators: ____

Wetland hydrology: Yes ___ No ___ Basis: ____

Atypical situation: Yes ___ No ___

Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: Yes | W 3ft | OW 12ft | W 3ft | W = wetland OW = Open Water

COMMENTS: Average width of stream 12 ft 4 to 5 ft deep

Average width of wetland 3 ft both sides

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DETERMINED BY: ____

United States
Department of
Agriculture

Soil
Conservation
Service

WETLAND DETERMINATION

APPLICANT NAME: Santa Clara Valley Water District/SCS
APPLICATION NUMBER:
PROJECT NAME: Lower Silver Creek W.S.

STATE: CA COUNTY: Santa Clara LOCATION: L. Silver Cr.

DATE: 1-14-92 PLOT NO.: 47+00 SECTION: 41+00 to 51+00
51+00 to 53+50 Concrete Bridge (Mckee Rd)

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Cattail (T. latifolia)	60	OBL
2.			12. Bermuda (C. dactylon)	10	FAC
3.			13. Ann. ryegrass (Lolium perenne)	2	UPL
4.			14. Hardstem bulrush (S. acutus)	20	OBL
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16. Blackberries (Rubus vitifolius)	5	FACW
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 95. Other indicators:
Hydrophytic vegetation: Yes ✓ No ___. Basis:

SOIL

Series and phase: Induston On Hydric Soils List? Yes ___ No X
Mottled: Yes ___ No X. Mottle color: ___. Matrix color: 5G 4/1
Gleyed: Yes X No ___ Other indicators: colors change on exposure to air; +
Hydric soils: Yes ✓ No ___ Basis: (2b(3)' 1991 criteria H_2O at 13"

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water:
Saturated soils: Yes ___ No ___ Depth to saturated soil:
Other indicators:
Wetland hydrology: Yes ___ No ___ Basis:
Atypical situation: Yes ___ No ___
Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: Yes $|\overset{W}{4ft}|\overset{OW}{12ft}|\overset{W}{2ft}|$

COMMENTS: Stream about 12 ft wide
Wetland 2 ft ave. on west, 4 ft ave on east bank

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DETERMINED BY:

United States Department of Agriculture
Soil Conservation Service

WETLAND DETERMINATION

APPLICANT NAME: SCVWD / SCS
APPLICATION NUMBER: ___
PROJECT NAME: Lower Silver Creek WS

STATE: CA
COUNTY: Santa Clara
LOCATION: Plata Arroyo Park

DATE: 1-15-92
PLOT NO.: 57+00
SECTION: Lower end of Park 53+50 to 60+00

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Bermuda	5	FAC
2.			12. Cattails	95	OBL
3.			13.		
4.			14.		
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 100. Other indicators: ___
Hydrophytic vegetation: Yes ✓ No ___. Basis: ___

SOIL

Series and phase: inclusion On Hydric Soils List? Yes ___ No X
Mottled: Yes X No ___. Mottle color: N 5/0. Matrix color: 2.5Y 5/3
Gleyed: Yes ___ No X Other indicators: ___
Hydric soils: Yes X No ___ Basis: 2 b (3) June 1991 criteria

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water: ___
Saturated soils: Yes ___ No ___ Depth to saturated soil: ___
Other indicators: ___
Wetland hydrology: Yes ___ No ___ Basis: ___
Atypical situation: Yes ___ No ___
Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION:
W OW W
|10ft | 5ft | 8ft |

COMMENTS: ___

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DETERMINED BY: ___

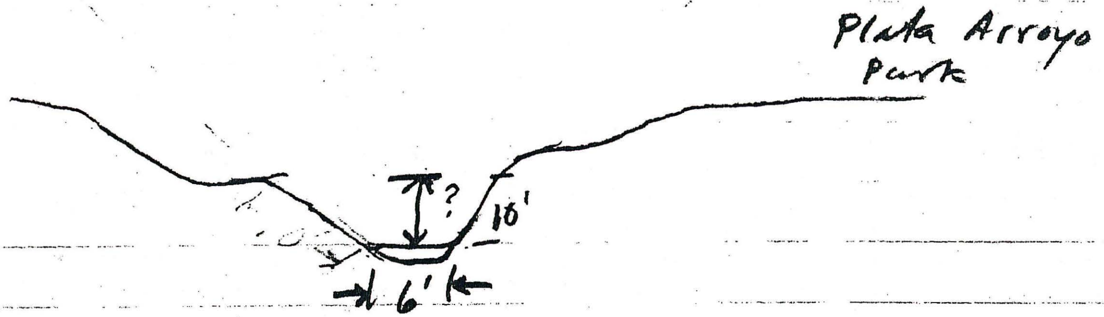
LOWER SILVER CREEK

1-15-92

Measurements of Recent High Flow
Plata Arroyo Park

Location: 57+00

10' Water surface to high water Mark
6' Open water width



United States Department of Agriculture

Soil Conservation Service

WETLAND DETERMINATION

APPLICANT NAME: Santa Clara Valley Water District / SCS

APPLICATION NUMBER:

PROJECT NAME: Lower Silver Creek W S

STATE: CA

COUNTY: Santa Clara

LOCATION: L. Silver Cr. - Plata Arroyo Park

DATE: 1-15-92

PLOT NO.: 61+00

SECTION: Upper end of Park 60+00 to 66+00

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Bermuda	40	FAC
2.			12. Cattail (T. latifolia, angustifolia)	45	OBL
3.			13. Cocklebur (Xanthium spinosum)	10	FAC+
4.			14. Ann ryegrass	15	UPL
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 95. Other indicators:

Hydrophytic vegetation: Yes ✓ No ___. Basis:

SOIL

Series and phase: indulon On Hydric Soils List? Yes ___ No X

Mottled: Yes X No ___. Mottle color: N 5/0. Matrix color: 2.5Y5/3

Gleyed: Yes ___ No X Other indicators: clean sand grains

Hydric soils: Yes X No ___ Basis: 2 b (3) June 1991 criteria

1.13 / 7

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water:

Saturated soils: Yes ___ No ___ Depth to saturated soil:

Other indicators:

Wetland hydrology: Yes ___ No ___ Basis:

Atypical situation: Yes ___ No ___

Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: Yes |12 ft W| 4 ft OW| 20 ft W|

250'

COMMENTS: West Bank: Slope - Bermuda Ann. rye (4 ft); Flat - Cattails (8 ft)

Upper end [illegible] to [illegible] → East Bank: Flat - cattails (8 ft); Slope - Bermuda cocklebur (12 ft)

Water table water point = 32"

East Bank 28.5 ft water edge to high water line

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DETERMINED BY:

LOWER SILVER CREEK

1-15-92

Measurements of Recent High Flow

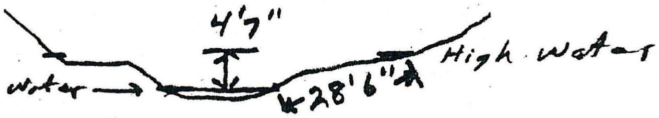
Station: 61+00

Plata Arroyo Park right bank

28'6" water surface to high water mark

4'7" Height of water to high water mark

4' Open water width



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WETLAND DETERMINATION

APPLICANT NAME: SCVWD/SCS

APPLICATION NUMBER: ______

PROJECT NAME: Lower Silver Creek WS

STATE: CA COUNTY: Santa Clara LOCATION: L. Silver Cr.

DATE: 1-15-92 PLOT NO.: 75+00 SECTION: 66+00 to 80+00

Upper end Plata Arroyo Park to Concrete

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1. Willow	1	OBL	11. Bermuda	97	FAC
2.			12. Cattail	2	OBL
3.			13.		
4.			14.		
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 100. Other indicators: ______

Hydrophytic vegetation: Yes ✓ No ___. Basis: ______

SOIL

Series and phase: Mcluston On Hydric Soils List? Yes ___ No X

Mottled: Yes X No ___. Mottle color: 7.5YR 4/6. Matrix color: 2.5Y 5/2

Gleyed: Yes ___ No X Other indicators: ______

Hydric soils: Yes X No ___ Basis: 2 b (3)

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water: ______

Saturated soils: Yes ___ No ___ Depth to saturated soil: ______

Other indicators: ______

Wetland hydrology: Yes ___ No ___ Basis: ______

Atypical situation: Yes ___ No ___

Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: $|\overset{W}{7ft}|\overset{OW}{7ft}|\overset{W}{7ft}|$

COMMENTS: Water depth about 2 ft. ave.

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DETERMINED BY: ______

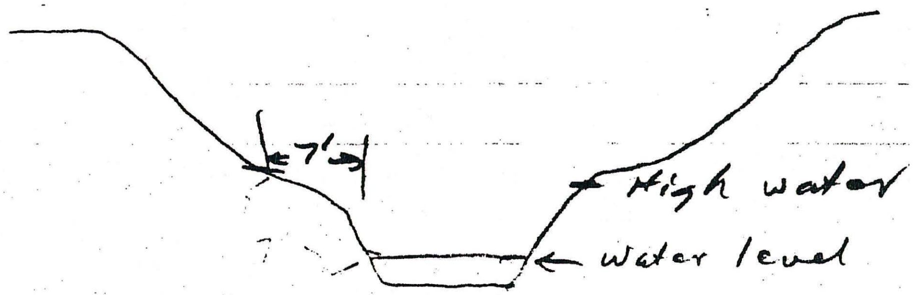
LOWER SILVER CREEK

1-15-92

Measurements of Recent High Flow

Station: 75+00

7' water level to high water mark



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WETLAND DETERMINATION

APPLICANT NAME: Santa Clara Valley Water District/SCS APPLICATION NUMBER: ____ PROJECT NAME: [illegible]

STATE: CA COUNTY: Santa Clara LOCATION: L. Silver Cr.

DATE: 1-15-92 PLOT NO.: — SECTION: 80+00 to 100+70

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11.		
2.			12.		
3.			13.		
4.			14.		
5.			15.		
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: ____. Other indicators: ____
Hydrophytic vegetation: Yes ___ No ___. Basis: ____

SOIL

Series and phase: ____ On Hydric Soils List? Yes ____ No X
Mottled: Yes ___ No ___. Mottle color: ____. Matrix color: ____
Gleyed: Yes ___ No ___ Other indicators: ____
Hydric soils: Yes ___ No ___ Basis: ____

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water: ____
Saturated soils: Yes ___ No ___ Depth to saturated soil: ____
Other indicators: ____
Wetland hydrology: Yes ___ No ___ Basis: ____
Atypical situation: Yes ___ No ___
Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: No = Concrete lined channel

COMMENTS: ____

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[illegible] [redacted]

WETLAND DETERMINATION

APPLICANT NAME: SCVWD/SCS
APPLICATION NUMBER: ____
PROJECT NAME: Lower Silver Creek WS

STATE: CA COUNTY: Santa Clara LOCATION: L. Silver Creek

DATE: 1-15-92 PLOT NO.: 111+00 SECTION: Mayfair Park 109+00 - 114+00

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Cattail (T. angustifolia, T. latifolia)	25	OBL
2.			12. Bermuda	55	FAC
3.			13. Cocklebur (Xanthium	10	FAC+
4.			14. ~~Nutgrass~~	~~7~~	
5.			15. Ann grasses	10	UPL
Sapling/Shrubs			Woody Vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 90. Other indicators: ____
Hydrophytic vegetation: Yes ✓ No ___. Basis: ____

SOIL

Series and phase: Inducton On Hydric Soils List? Yes ___ No X
Mottled: Yes X No ___. Mottle color: 7.5YR 4/6. Matrix color: 2.5Y 4/2
Gleyed: Yes ___ No X Other indicators: some clean sand grains
Hydric soils: Yes X No ___ Basis: 2 (b) 3 Jan 1991 criteria

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water: ____
Saturated soils: Yes ___ No ___ Depth to saturated soil: ____
Other indicators: ____
Wetland hydrology: Yes ___ No ___ Basis: ____
Atypical situation: Yes ___ No ___
Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: Yes | $\overset{w}{15ft}$ | $\overset{ow}{5ft}$ | $\overset{w}{8ft}$ |

COMMENTS: ____

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United States Department of Agriculture

Soil Conservation Service

[redacted] [redacted]

WETLAND DETERMINATION

APPLICANT NAME: SCVWD / SCS

APPLICATION NUMBER:

PROJECT NAME: Lower Silver Creek WS

STATE: CA COUNTY: Santa Clara LOCATION: Lower Silver Creek

DATE: 1-15-92 PLOT NO.: 121+00 SECTION: 100+70 to 109+00
114+00 to 123+00
131+00 to 155+50

See Mayfair Park

103+00 - 105+00 Concrete lined
123+00 - 131+00 Concrete lined

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Cattails	60	OBL
2.			12. Cockleburs	10	FAC+
3.			13. ~~It.~~ ryegrass (Lolium multiflorum)	5	UPL
4.			14. Bermuda	15	FAC
5.			15. Ann grasses	10	UPL
Sapling/Shrubs			Woody Vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 85. Other indicators:
Hydrophytic vegetation: Yes ✓ No ___. Basis:

SOIL

Series and phase: inclusion On Hydric Soils List? Yes ___ No X
Mottled: Yes X No ___. Mottle color: 7.5YR 4/6. Matrix color: 2.5Y 4/2
Gleyed: Yes ___ No ___ Other indicators: H₂O at 17"
Hydric soils: Yes ✓ No ___ Basis: 2 b (3) June 1991 criteria

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water:
Saturated soils: Yes ___ No ___ Depth to saturated soil:
Other indicators:
Wetland hydrology: Yes ___ No ___ Basis:
Atypical situation: Yes ___ No ___
Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: W OW W
|6 ft | 8 ft | 5 ft |

COMMENTS:

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WETLAND DETERMINATION

APPLICANT NAME: SCVWD/SCS
APPLICATION NUMBER: ____
PROJECT NAME: Lower Silver Creek WS

STATE: CA COUNTY: Santa Clara LOCATION: Lo. Silver Cr.

DATE: 1-15-92 PLOT NO.: 162+00 SECTION: 156+00 to 170+00
153+50 to 156+00 concrete

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

Cyperus esculentus?

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Common smartweed (Polygonum lapathifolium)	25	OBL
2.			12. Cattail (T. latifolia, T. angustifolia)	25	OBL
3.			13. Nutgrass (Cyperus Eragrostis)	5	FACW
4.			14. Bermuda	25	FAC
5.			15. Barnyardgrass (Echinochlo crusgalli)	20	UPL
Sapling/Shrubs			Woody vines		
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 80. Other indicators: ____
Hydrophytic vegetation: Yes ✓ No ___. Basis: ____

SOIL

Series and phase: indusion On Hydric Soils List? Yes ___ No X
Mottled: Yes X No ___. Mottle color: 7.5YR 4/6. Matrix color: 2.5Y 4/2
Gleyed: Yes ___ No X Other indicators: H_2O table at 14"
Hydric soils: Yes X No ___ Basis: 2 b (3) June 1991 criteria

HYDROLOGY

Inundated: Yes ___ No ___ Depth of standing water: ____
Saturated soils: Yes ___ No ___ Depth to saturated soil: ____
Other indicators: ____
Wetland hydrology: Yes ___ No ___ Basis: ____
Atypical situation: Yes ___ No ___
Normal circumstances: Yes ___ No ___

WETLAND DETERMINATION: | 2 ft | 5 ft | 1 ft |
W OW W

COMMENTS: Water surface to high water 4.5 ft
rock rip rap on right bank

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WETLAND DETERMINATION

APPLICANT NAME: SCVWD/SCS
APPLICATION NUMBER:
PROJECT NAME: Lower Silver Creek WS

STATE: CA COUNTY: Santa Clara LOCATION: L. Silver Creek

DATE: 1-15-92 PLOT NO.: 240+00 SECTION: 170+00 to 244+00

VEGETATION

List the three dominant species in each vegetation layer (5 if only 1 or 2 layers). Indicate species with observed morphological or known physiological adaptations with an asterisk.

SPECIES	%	INDICATOR STATUS	SPECIES	%	INDICATOR STATUS
Trees			Herbs		
1.			11. Cattails (T.a., T.l.)	73	OBL
2.			12. Bermuda	7	FAC
3.			13. Bulthistle (Cirsium vulgare)	4	FACW
4.			14 fa Smartweed (Polygonum lapathifolium)	2	FACW
5.			15. Ann grasses	5	UPL
Sapling/Shrubs			Woody vines Sweet fennel (Foeniculum vulgare	5	FACW
6.			16.		
7.			17.		
8.			18.		
9.			19.		
10.			20.		

% of species that are OBL, FACW, and/or FAC: 86. Other indicators:
Hydrophytic vegetation: Yes ✓ No . Basis:

SOIL

Series and phase: inclusion On Hydric Soils List? Yes No X
Mottled: Yes X No . Mottle color: 5YR 4/6. Matrix color: 2.5Y 4/2
Gleyed: Yes No X Other indicators: H_2O table at 19"
Hydric soils: Yes X No Basis: 2b(3)

HYDROLOGY

Inundated: Yes No Depth of standing water:
Saturated soils: Yes No Depth to saturated soil:
Other indicators:
Wetland hydrology: Yes No Basis:
Atypical situation: Yes No
Normal circumstances: Yes No

W OW W
WETLAND DETERMINATION: / 5 / 10 / 5 /

COMMENTS:

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